

EXHIBIT 4.8

FERC FEIS for MIDSHIP Project (continued)

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APPENDIX C

SUMMARY OF EXISTING RIGHTS-OF-WAY COLLOCATED WITH THE MIDCONTINENT SUPPLY HEADER INTERSTATE PIPELINE PROJECT PIPELINES

APPENDIX C					
Summary of Existing Rights-of-Way Collocated with the Midcontinent Supply Header Interstate Pipeline Project Pipelines ^a					
Pipeline Route/ Collocated Utility	Utility Type	Begin Milepost	End Milepost	Direction to Existing Right-of-Way ^b	Paralleled Length (miles)
Mainline					
Phillips 66	Pipeline	0.0	0.1	South	0.1
Canadian County (N27300)	Road	9.6	9.7	West	0.2
EnLink	Pipeline	9.7	9.8	East	0.1
Canadian County (N27300)	Road	9.8	10.7	East	1.0
ONEOK	Pipeline	10.7	11.1	East	0.4
ONEOK	Pipeline	11.4	11.6	North	0.2
Enogex	Pipeline	11.6	12.3	West	0.7
EnLink	Pipeline	12.3	12.8	West	0.4
EnLink	Pipeline	12.8	13.3	Northeast	0.6
Plains	Pipeline	13.3	13.6	Northeast	0.2
Enable Midstream	Pipeline	13.8	13.9	Southwest	0.1
Unknown	Overhead Utility	16.0	16.3	West	0.3
Enable Midstream	Pipeline	16.3	17.2	West	0.9
ONEOK	Pipeline	17.2	17.3	North	0.1
ONEOK	Pipeline	17.3	17.5	South	0.2
EnLink	Pipeline	18.7	19.2	East	0.5
Unknown	Overhead Utility	19.3	19.4	South	0.1
Devon	Pipeline	19.6	19.7	South	0.1
DCP	Pipeline	29.1	29.2	East	0.1
DCP	Pipeline	31.7	31.7	West	0.1
Grady County (N28800)	Road	45.4	45.9	East	0.5
Enable Midstream	Pipeline	50.0	50.2	Southwest	0.2
Velocity	Pipeline	71.9	72.2	South	0.3
Enable Midstream	Pipeline	72.2	72.7	East	0.5
Velocity	Pipeline	72.7	73.5	West	0.8
Enable Midstream	Pipeline	73.5	73.8	West	0.3
Velocity	Pipeline	74.6	75.0	West	0.4
Velocity	Pipeline	75.2	75.5	East	0.3
UK	Powerline	76.3	76.4	North	0.1
OGE	Pipeline	77.8	78.4	South	0.6
Targa	Pipeline	79.2	79.3	West	0.1
DCP	Pipeline	80.2	80.3	East	0.1
Targa	Pipeline	80.3	80.3	North	0.1
Mobil	Pipeline	81.0	82.1	East	1.0
Velocity	Pipeline	83.8	83.9	West	0.1
Enogex	Pipeline	83.9	84.4	Northeast	0.5
DCP	Pipeline	84.8	84.9	Northeast	0.1
Enable Midstream	Pipeline	84.9	85.5	Northeast	0.6
Unknown	Powerline	86.3	86.4	East	0.1
Newfield	Pipeline	86.9	87.2	East	0.4
Newfield	Pipeline	87.2	87.6	West	0.4
DCP	Pipeline	89.4	89.5	East	0.1
Enable Midstream	Pipeline	89.5	89.7	Northeast	0.2
Unknown	Pipeline	94.9	94.9	West	0.1
Unknown	Pipeline	95.2	95.3	East	0.1
Citation	Pipeline	103.1	103.5	Southwest	0.4

APPENDIX C (cont'd)					
Summary of Existing Rights-of-Way Collocated with the Midcontinent Supply Header Interstate Pipeline Project Pipelines ^a					
Pipeline Route/ Collocated Utility	Utility Type	Begin Milepost	End Milepost	Direction to Existing Right-of-Way ^b	Paralleled Length (miles)
Kinder Morgan	Pipeline	177.8	178.1	South	0.8
Kinder Morgan	Pipeline	178.1	179.1	North	0.9
Kinder Morgan	Pipeline	179.1	179.5	South	0.4
Kinder Morgan	Pipeline	179.8	181.0	South	1.2
Kinder Morgan	Pipeline	181.0	181.8	North	0.8
Kinder Morgan	Pipeline	181.8	185.1	South	3.8
Kinder Morgan	Pipeline	185.4	190.5	South	5.2
Kinder Morgan	Pipeline	190.5	191.0	North	0.5
Kinder Morgan	Pipeline	191.0	192.5	South	1.5
Kinder Morgan	Pipeline	192.5	192.8	North	0.2
Kinder Morgan	Pipeline	192.8	192.8	South	0.2
Kinder Morgan	Pipeline	193.3	199.0	South	5.8
Bryan County (N39400)	Road	199.0	199.8	East	0.8
Subtotal					97.8
Chisholm Lateral					
ONEOK	Pipeline	CH0.0	CH0.1	West	0.1
ONEOK	Pipeline	CH0.1	CH0.9	North	0.8
Kingfisher County (E08600)	Road	CH1.4	CH2.1	North	0.7
Kingfisher County (E08600)	Road	CH2.2	CH2.9	North	0.7
Plains	Pipeline	CH2.9	CH3.3	South	0.4
Kingfisher County (E08600)	Road	CH3.3	CH4.2	South	0.9
Plains	Pipeline	CH4.2	CH5.9	South	1.8
EnLink	Pipeline	CH6.3	CH7.0	South	0.8
EnLink	Pipeline	CH7.0	CH7.4	North	0.4
EnLink	Pipeline	CH8.4	CH8.8	North	0.2
DCP	Pipeline	CH9.4	CH10.2	North	0.8
DCP	Pipeline	CH10.2	CH10.4	South	0.2
Enable Midstream	Pipeline	CH10.4	CH10.8	South	0.2
Enable Midstream	Pipeline	CH10.8	CH11.9	North	1.3
Enable Midstream	Pipeline	CH11.9	CH14.7	South	2.8
Kingfisher County (E0870)	Road	CH14.7	CH16.3	North	1.5
Enable Midstream	Pipeline	CH16.5	CH18.1	Northwest	1.6
DCP	Pipeline	CH18.1	CH20.2	North	2.1
Subtotal					17.3
Velma Lateral					
Atlas Energy	Pipeline	VE0.0	VE0.2	North	0.2
Southern Star	Pipeline	VE0.2	VE0.6	East	0.3
Southern Star	Pipeline	VE0.6	VE2.4	North	1.8
Sunoco	Pipeline	VE2.9	VE3.4	North	0.5
Sunoco	Pipeline	VE3.6	VE5.0	North	1.4
DCP	Pipeline	VE5.0	VE5.2	West	0.2
DCP	Pipeline	VE5.2	VE6.0	North	0.8
County Utility	Powerline/Cable/Pipeline	VE6.0	VE6.1	North	0.1
County Utility/Southern Star	Powerline/Cable/Pipeline	VE6.1	VE6.5	South	0.4
DCP	Pipeline	VE6.5	VE6.8	East	0.2
Enable	Pipeline	VE6.9	VE7.0	West	0.1
County Utility/Enable	Powerline/Cable/Pipeline	VE7.0	VE7.0	East	0.1

APPENDIX D

**ADDITIONAL TEMPORARY WORKSPACE ASSOCIATED WITH CONSTRUCTION OF THE
MIDCONTINENT SUPPLY HEADER INTERSTATE PIPELINE PROJECT**

APPENDIX D						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
MAINLINE						
Kingfisher						
1001	0.0	50 x 202	0.2	Agriculture, open land	Meter station construction	No
1002	0.2	25 x 200	0.1	Open land	Spoils for significant point of inflection (PI)	No
1003	0.3	25 x 250	0.1	Agriculture	Pipeline crossing	No
1004	0.4	50 x 225	0.3	Agriculture	Road crossing	No
Canadian						
1006	0.5	50 x 150	0.2	Agriculture, open land	Road crossing	No
1007	1.6	50 x 355	0.4	Agriculture, open land	Road crossing	No
1007A	1.6	50 x 150	0.1	Agriculture	Road crossing and staging area for parking/equipment	No
1008	1.6	50 x 150	0.2	Agriculture	Road crossing	No
1009	1.8	25 x 200	0.1	Agriculture	Pipeline crossing	No
1009A	2.1	50 x 200	0.3	Open land	Spoils for significant PI	No
1009B	2.3	50 x 200	0.3	Open land	Spoils for significant PI	No
1010	2.7	50 x 220	0.3	Open land	Road crossing and pipeline crossing	No
1011	2.8	50 x 200	0.2	Agriculture, open land	Road crossing	No
1012	3.8	50x 205	0.2	Agriculture, open land	Road crossing	No
1013	3.8	50 x 150	0.2	Open land	Road crossing	No
1014	4.4	25 x 200	0.1	Open land	Pipeline crossing	No
1015	4.8	50 x 150	0.2	Open land	Road crossing	No
1016	4.9	50 x 150	0.2	Developed land, open land	Road crossing	No
1017	5.0	25 x 200	0.1	Open land	Pipeline crossing	No
1018	5.9	50 x 150	0.2	Open land	Road crossing	No
1019	5.9	50 x 150	0.2	Agriculture	Road crossing	No
1020	6.0	50 x 250	0.3	Open land	Road crossing	No
1021	6.0	50 x 285	0.4	Agriculture	Road crossing	No
1022	6.7	50 x 200	0.2	Open land	Stream crossing	No
1023	6.7	50 x 200	0.2	Open land	Stream crossing	No
1024	6.9	25 x 200	0.1	Open land	Pipeline crossing	No
1025	6.9	50 x 320	0.4	Developed land, open land	Road crossing	No
1026	7.0	25 x 185	0.2	Developed land, open land	Pipeline crossing	No
1027	7.0	50 x 350	0.4	Developed land, open land	Pipeline crossing	No
1029	7.3	25 x 400	0.2	Agriculture, Open land	Stream crossing	No
1031	7.5	50 x 200	0.2	Agriculture	Horizontal directional drill (HDD) – North Canadian River	No
1031A	7.5	50 x 200	0.2	Agriculture	HDD – North Canadian River	No
1032	7.8	50 x 200	0.2	Agriculture	HDD – North Canadian River	No
1032A	7.8	50 x 200	0.2	Agriculture, Open Land	HDD – North Canadian River	No
1033	8.0	125 x 350	1.0	Agriculture, open land	HDD and Road crossing	No
1034	8.1	50 x 150	0.2	Agriculture	Road crossing	No
1034A	8.8	50 x 200	0.3	Agriculture	Spoils for significant PI	No
1035	9.2	50 x 200	0.3	Residential	Road crossing	No
1036	9.2	50 x 150	0.2	Agriculture	Road crossing	No
1037	9.3	75 x 150	0.2	Agriculture	Railroad/highway crossing	No
1038	9.3	75 x 150	0.3	Open land	Road crossing	No
1038A	9.4	50 x 200	0.3	Open land	Spoils for significant PI	No
1039	9.5	50 x 200	0.2	Open land	Stream crossing	No
1040	9.5	50 x 188	0.2	Open land	Stream crossing	No
1041	9.7	35 x 150	0.1	Open land	Road crossing and pipeline crossing	No
1042	9.7	50 x 246	0.3	Agriculture, open land	Pipeline crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1084	16.0	35 x 250	0.2	Agriculture, open land	Stream crossing	No
1085	16.1	35 x 265	0.2	Open land	Stream crossing	No
1087	16.2	50 x 150	0.2	Agriculture, forest, open land	Road crossing	No
1088	16.3	25 x 310	0.2	Agriculture	Pipeline crossing	No
1088A	16.3	50 x 365	0.4	Agriculture	Pipeline crossing and spoils for significant PI	No
1088B	16.7	50 x 200	0.2	Open land	Spoils for significant PI	No
1089	16.8	50 x 200	0.2	Forest, open land	Stream crossing	No
1090	16.9	50 x 200	0.2	Agriculture, forest, open land	Stream crossing	No
1091	17.1	50 x 430	0.5	Agriculture	Pipeline crossing	No
1092	17.2	35 x 200	0.2	Agriculture, forest, open land	Wetland crossing	No
1093	17.3	50 x 250	0.2	Agriculture, forest, open land	Pipeline crossing/wetland crossing	No
1093A	17.4	50 x 200	0.2	Agriculture, forest, open land	Road and environmental feature crossing	No
1095	17.7	50 x 1168	1.3	Agriculture, developed land, open land	Road crossing	No
1097	17.7	593 x 1135	15.3	Agriculture, developed land	Compressor station	No
1097A	17.8	50 x 200	0.3	Agriculture	Spoils for significant PI	No
1098	18.2	50 x 200	0.2	Open land	Wetland crossing/stream crossing	No
1099	18.3	50 x 200	0.2	Agriculture, forest	Wetland crossing/stream crossing	No
1100	18.4	25 x 200	0.1	Agriculture	Pipeline crossing	No
1102	19.2	50 x 260	0.4	Agriculture	Road crossing and pipeline crossing	No
1103	19.3	50 x 120	0.1	Open land	Road crossing/wetland crossing	No
1104	19.3	50 x 200	0.2	Forest, open land	Wetland crossing/stream crossing	No
1105	19.6	25 x 200	0.1	Agriculture	Pipeline crossing	No
1106	19.9	50 x 200	0.2	Open land	Stream crossing	No
1108	20.0	50 x 350	0.4	Developed land, open land	Road crossing/stream crossing	No
1110	20.0	50 x 150	0.2	Open land	Road crossing	No
1111	20.7	50 x 200	0.3	Agriculture, open land	Road crossing	No
1112	20.8	50 x 200	0.3	Agriculture, open land	Temporary soil storage	No
1114	21.3	50 x 200	0.2	Agriculture	Road crossing and pipeline crossing	No
1116	21.4	50 x 350	0.4	Agriculture, open land	Pipeline crossing	No
1117	21.7	25 x 200	0.1	Agriculture	Pipeline crossing	No
1118	22.5	50 x 575	0.7	Open land	Road crossing and pipeline crossing	No
1119	22.5	50 x 150	0.2	Agriculture, open land	Road crossing	No
1120	22.7	50 x 200	0.3	Agriculture	Road crossing	No
1121	22.8	50 x 250	0.3	Agriculture, open land	Road crossing and pipeline crossing	No
1122	23.1	50 x 200	0.2	Agriculture, forest	Stream crossing	No
1123	23.1	50 x 200	0.2	Forest, open land	Stream crossing	No
1124	23.2	25 x 220	0.1	Open land	Pipeline crossing	No
1125	23.8	50 x 250	0.3	Agriculture, open land	Road crossing and pipeline crossing	No
1126	23.9	50 x 150	0.2	Agriculture	Road crossing	No
1127	24.1	25 x 200	0.1	Agriculture	Pipeline crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1177	34.6	50 x 150	0.2	Open land	Stream crossing	No
1178A	34.6	50 x 198	0.3	Agriculture, open land	Spoils for significant PI and parking/equipment, stream crossing	No
1178	34.7	50 x 200	0.2	Agriculture, open land	Wetland crossing	No
1178A	34.7	50 x 237	0.3	Agriculture, open land	Spoils for significant PI	No
1179	34.8	50 x 300	0.4	Agriculture	Stream crossing	No
1181	35.2	50 x 150	0.2	Agriculture, open land	Road crossing	No
1180	35.3	50 x 150	0.2	Open land	Road crossing	No
1182	35.3	50 x 400	0.5	Open land, residential	Road crossing	No
1184	35.4	50 x 200	0.2	Agriculture	Stream crossing	No
1185	35.6	25 x 285	0.2	Agriculture	Pipeline crossing	No
1188	36.0	25 x 200	0.1	Agriculture	Pipeline crossing	No
1187	36.4	248 x 226	1.2	Agriculture, developed land, open land	Stream crossing	No
1189	36.4	50 x 200	0.3	Agriculture	Road crossing	No
1190	36.5	47 x 209	0.2	Agriculture	Road crossing	No
1190A	36.5	100 x 150	0.5	Agriculture, open land	Road crossing	No
1191	36.7	65 x 200	0.3	Agriculture	HDD – Oklahoma Kansas and Texas Railroad	No
1191A	36.7	35 x 200	0.2	Agriculture	HDD – Oklahoma Kansas and Texas Railroad	No
1192	37.0	65 x 200	0.3	Open land	HDD – Oklahoma Kansas and Texas Railroad	No
1192A	37.0	35 x 200	0.2	Open land	HDD – Oklahoma Kansas and Texas Railroad	No
1192B	37.1	75 x 1744	2.8	Open land	Spoils for significant PI	No
1192C	37.3	50 x 200	0.2	Developed land, open land	Staging area for parking/equipment	No
1193	37.4	25 x 200	0.1	Agriculture	Pipeline crossing	No
1194	37.8	50 x 150	0.2	Open land	Road crossing	No
1195	37.8	50 x 150	0.2	Open land	Road crossing	No
1197	38.2	50 x 150	0.2	Open land	Road crossing	No
1198	38.2	50 x 150	0.2	Agriculture, open land	Road crossing	No
1199	38.8	25 x 200	0.1	Agriculture	Pipeline crossing	No
1200	38.9	50 x 200	0.3	Agriculture, open land	Road crossing	No
1201	38.9	50 x 150	0.2	Agriculture	Road crossing	No
1201A	39.1	50 x 197	0.2	Open land	Staging area for parking/equipment	No
1202	39.3	50 x 143	0.2	Open land	Stream crossing	No
1203	39.4	50 x 74	0.1	Forest, open land	Stream crossing	No
1204	40.0	50 x 150	0.2	Agriculture, open land	Road crossing	No
1205	40.0	50 x 150	0.2	Agriculture	Road crossing	No
1208	40.7	50 x 150	0.2	Open land	Road crossing	No
1207	40.8	50 x 257	0.2	Agriculture, open land	Road crossing	No
1208	41.1	50 x 200	0.2	Open land	Stream crossing	No
1209	41.1	50 x 200	0.2	Forest	Stream crossing	No
1210	42.2	50 x 150	0.2	Open land	Road crossing	No
1211	42.2	50 x 107	0.1	Open land	Road crossing/stream crossing	No
1212	42.3	50 x 108	0.2	Agriculture, forest	Stream crossing	No
1213	43.7	50 x 200	0.2	Open land	Stream crossing	No
1214	43.7	50 x 117	0.1	Forest, open land	Stream crossing	No
1215	43.7	50 x 151	0.2	Open land	Stream crossing	No
1216	44.0	50 x 150	0.2	Open land	Road crossing	No
1217	44.1	50 x 150	0.2	Open land	Road crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project *						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^a
1262	54.4	50 x 200	0.2	Agriculture, forest	Stream crossing	No
1263	54.5	50 x 200	0.2	Agriculture, forest	Stream crossing	No
1264	54.6	50 x 150	0.2	Agriculture	Road crossing	No
1265	54.6	50 x 150	0.2	Agriculture, forest	Road crossing	No
1266	55.4	25 x 200	0.1	Open land	Pipeline crossing	No
1267	55.4	25 x 200	0.1	Open land	Pipeline crossing	No
1268	55.6	100 x 200	0.4	Open land	Road crossing	No
1270	55.7	100 x 210	0.5	Open land, residential	Road crossing	No
1270A	56.0	50 x 135	0.2	Forest, open land	Stream crossing	No
1270B	56.1	50 x 200	0.2	Forest, open land	Stream crossing	No
1271	56.5	50 x 189	0.2	Open land	Wetland crossing	No
1273	56.8	50 x 174	0.2	Open land	Pipeline crossing/stream crossing	No
1274	56.8	50 x 200	0.2	Forest, open land	Stream crossing	No
1271A	56.8	50 x 358	0.3	Forest, open land	Spills for significant PI	No
1274A	56.9	50 x 150	0.2	Open land	Road crossing	No
1274B	56.9	50 x 150	0.2	Open land	Road crossing	No
1275	57.0	50 x 200	0.2	Forest, open land	Stream crossing	No
1276	57.1	50 x 200	0.2	Forest, open land	Stream crossing	No
1278	57.4	50 x 200	0.2	Open land	Road crossing	No
1279	57.4	50 x 200	0.3	Open land	Road crossing	No
1280	57.5	50 x 200	0.2	Forest, open land	Stream crossing	No
1281	57.6	50 x 200	0.2	Forest, open land	Stream crossing	No
1282	57.7	50 x 200	0.2	Open land	Stream crossing	No
1283	58.1	35 x 200	0.2	Forest, open land	Stream crossing	No
1284	58.2	35 x 279	0.2	Open land	Stream crossing	No
1285	58.2	35 x 200	0.2	Open land	Stream crossing	No
1286	58.3	35 x 200	0.2	Open land	Stream crossing	No
1287	58.4	35 x 130	0.1	Open land	Stream crossing	No
1288	59.0	50 x 200	0.2	Open land	Road crossing	No
1289	59.0	50 x 106	0.1	Open land	Road crossing/stream crossing	No
1290	59.1	50 x 200	0.2	Open land	Stream crossing	No
1290A	59.1	50 x 205	0.3	Open land	Staging area for parking/equipment	No
1291	59.6	50 x 314	0.4	Forest, open land	Stream crossing	No
1292	59.7	50 x 200	0.2	Forest, open land	Stream crossing	No
1293	59.8	50 x 150	0.2	Open land	Road crossing	No
1294	59.8	50 x 200	0.3	Open land	Road crossing	No
1294A	59.8	50 x 150	0.2	Open land	Spills for significant PI	No
1295	60.2	50 x 150	0.2	Open land	Road crossing	No
1296	60.2	50 x 220	0.2	Open land	Road crossing	No
1297	60.2	50 x 150	0.2	Forest, open land	Road crossing	No
1297A	60.4	50 x 200	0.3	Open land	Spills for significant PI	No
1297B	60.5	100 x 100	0.2	Open land	Water access for hydrostatic testing	AS-GR- NHD-WB- 335
1298	60.8	50 x 150	0.2	Open land	Stream crossing	No
1299	60.9	50 x 200	0.2	Agriculture, open land	Stream crossing	No
1298A	60.9	50 x 200	0.3	Agriculture	Spills for significant PI	No
1299A	60.9	50 x 200	0.2	Agriculture, open land	Environmental feature crossing	No
1300	61.0	50 x 375	0.5	Developed land, open land	Stream crossing	No
1299B	61.0	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1301	61.1	50 x 200	0.2	Open land	Stream crossing	No
1302	61.3	25 x 200	0.1	Open land	Pipeline crossing	No
1303	61.5	50 x 150	0.2	Open land	Road crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1343A	69.4	50 x 146	0.2	Forest, open land	Pipeline crossing/stream crossing	No
1346	69.8	50 x 228	0.3	Open land	Road crossing and pipeline crossing	No
1347	69.9	50 x 200	0.2	Agriculture	Road crossing and pipeline crossing	No
1349	71.0	35 x 107	0.1	Agriculture	Stream crossing	No
1350	71.1	60 x 200	0.3	Agriculture, developed land, open land	Stream crossing	No
1351	71.9	50 x 266	0.3	Agriculture, forest	Stream crossing	No
1350A	71.9	50 x 222	0.3	Agriculture	Pipeline crossing and spoils for significant PI	No
1352	72.0	50 x 196	0.2	Forest, open land	Pipeline crossing/stream crossing	No
1363	72.2	50 x 300	0.3	Developed land, open land	Road crossing and pipeline crossing	No
1352A	72.2	50 x 200	0.3	Open land	Spoils for significant PI	No
1353A	72.7	50 x 318	0.4	Forest, open land	Pipeline crossing and spoils for significant PI	No
1353B	72.7	50 x 286	0.3	Open land	Pipeline crossing/stream crossing	No
1356	73.3	51 x 159	0.2	Developed land, open land	Road crossing	No
1358	73.4	50 x 200	0.2	Forest, open land	Stream crossing	No
1359	73.5	25 x 200	0.1	Forest, open land	Pipeline crossing	No
1360	73.7	50 x 200	0.2	Forest, open land	Stream crossing	No
1361	73.8	50 x 200	0.2	Forest	Stream crossing	No
1361A	73.9	50 x 200	0.2	Open land	Spoils for significant PI	No
1361B	73.9	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1362	74.0	25 x 100	0.1	Developed land, open land	Road crossing	No
1363	74.0	58 x 215	0.2	Open land	Road crossing and pipeline crossing	No
1363A	74.1	25 x 222	0.1	Forest, open land	Spoils for significant PI	No
1363B	74.3	50 x 285	0.4	Developed land, forest, open land	Road crossing	No
1363C	74.3	50 x 200	0.2	Developed land, open land	Staging area for parking/equipment	W-GR- WCR- 16/12/13-03
1365	74.5	25 x 255	0.2	Open land	Pipeline crossing	No
1366	74.6	50 x 252	0.3	Forest, open land	Pipeline crossing	No
1367	74.8	50 x 200	0.2	Forest	Stream crossing	No
1368	74.8	50 x 200	0.2	Forest, open land	Stream crossing	No
1369	75.1	25 x 200	0.1	Open land	Pipeline crossing	No
1371	75.2	50 x 200	0.3	Open land	Stream crossing	No
1371A	75.2	25 x 137	0.1	Open land	Pipeline crossing and spoils for significant PI	No
1373	75.3	50 x 197	0.2	Forest, open land	Stream crossing	No
1371B	75.3	50 x 200	0.3	Open land	Spoils for significant PI	No
1374	75.4	50 x 223	0.3	Forest	Stream crossing	No
1374A	75.5	25 x 100	0.1	Forest	Spoils for significant PI	No
1375A	75.7	25 x 200	0.1	Forest	Pipeline crossing	No
1376	75.8	25 x 200	0.1	Forest, open land	Pipeline crossing	No
1377	76.1	50 x 200	0.2	Forest, open land	Stream crossing	No
1378	76.2	50 x 200	0.2	Forest, open land	Stream crossing	No
1379	76.3	50 x 200	0.2	Open land	Stream crossing	No
1379A	76.3	50 x 146	0.2	Open land	Road crossing	No
1381	76.5	25 x 206	0.1	Open land	Pipeline crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1407	81.5	50 x 200	0.2	Forest, open land	Stream crossing	No
1408	81.6	50 x 200	0.2	Forest, open land	Stream crossing	No
1411	82.1	92 x 124	0.3	Open land	Pipeline crossing	No
1412	82.2	50 x 349	0.4	Open land	Pipeline crossing	No
1413	82.4	50 x 145	0.2	Open land	Road crossing and pipeline crossing	No
1414	82.4	50 x 165	0.2	Open land	Road crossing and pipeline crossing	No
1415	82.5	25 x 150	0.1	Open land	Pipeline crossing	No
1418	82.8	50 x 415	0.5	Forest, open land	Pipeline crossing	No
1419	82.9	50 x 150	0.2	Developed land, forest, open land	Road crossing	No
1420	83.0	50 x 150	0.2	Open land	Road crossing and pipeline crossing	No
1420A	83.1	50 x 200	0.2	Open land	Staging area for parking/equipment	No
1420B	83.7	50 x 200	0.3	Agriculture, developed land, open land	Road crossing and spoils for significant PI	No
1421	83.8	50 x 265	0.3	Forest, open land	Stream crossing	No
1422	83.9	50 x 625	0.7	Open land	Stream crossing	No
1422A	84.0	50 x 200	0.2	Developed land, open land	Spoils for significant PI	No
1424	84.1	50 x 298	0.3	Open land	Pipeline crossing/stream crossing	No
1425	84.1	50 x 200	0.2	Open land	Pipeline crossing/stream crossing	No
1426	84.5	50 x 171	0.2	Developed land, open land	Road crossing	No
1427	84.5	100 x 206	0.3	Developed land, open land	Road crossing and pipeline crossing	No
1428	84.5	50 x 213	0.3	Agriculture, open land	Road crossing and pipeline crossing	No
1429	84.8	50 x 486	0.4	Open land	Pipeline crossing	No
1431	84.9	50 x 200	0.2	Open land	Stream crossing	No
1432	85.0	25 x 200	0.1	Open land	Pipeline crossing	No
1435	85.1	50 x 195	0.2	Open land	Road crossing	No
Stephens						
1436	85.2	50 x 150	0.2	Open land	Road crossing	No
1437	85.5	82 x 2359	0.4	Developed land, forest, open land	Pipeline crossing	No
1437A	85.6	50 x 200	0.2	Forest, open land	Pipeline crossing and parking/equipment	No
1438	85.7	100 x 150	0.3	Forest, open land	Stream crossing	No
1440	85.7	50 x 189	0.2	Open land	Road crossing	No
1441	85.7	50 x 150	0.2	Open land	Road crossing	No
1442	85.8	50 x 200	0.2	Open land	Road crossing	No
1443	85.9	50 x 177	0.3	Developed land, open land	Stream crossing	No
1443A	86.1	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1443B	86.2	50 x 200	0.2	Open land	Environmental feature crossing	No
1445	86.3	25 x 205	0.1	Forest, open land	Pipeline crossing	No
1445A	86.3	50 x 200	0.26	Open land	Road crossing	No
1446	86.6	25 x 434	0.3	Open land	Pipeline crossing	No
1448	86.7	35 x 142	0.1	Developed land, open land	Road crossing	No
1449	86.8	35 x 300	0.2	Agriculture, forest, Developed Land	Road crossing	No
1451	86.9	35 x 200	0.2	Agriculture, Open Land, Forest	Stream crossing	No
1452	87.0	50 x 200	0.2	Agriculture	Stream crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1490	92.4	50 x 100	0.1	Open land	Stream crossing	No
1489A	92.4	100 x 100	0.2	Open land	Water access for hydrostatic testing	S-GA-TAS- 17/10/27-02
1491	92.5	50 x 100	0.1	Open land	Stream crossing	No
1491A	92.6	50 x 154	0.2	Forest	Staging area for parking/equipment	No
1492	92.8	50 x 200	0.2	Forest	Stream crossing	No
1493	92.9	50 x 200	0.2	Forest, open land	Stream crossing	No
1494	93.0	50 x 200	0.2	Open land	Pipeline crossing	No
1493A	93.0	50 x 200	0.2	Open land	Road crossing	No
1495	93.1	50 x 200	0.2	Open land	Stream crossing	No
1496	93.2	50 x 200	0.2	Open land	Stream crossing	No
1497	93.5	50 x 150	0.1	Developed land, open land	Road crossing	No
1498	93.6	50 x 161	0.2	Developed land, open land	Road crossing	No
1499	93.6	50 x 150	0.2	Open land	Road crossing	No
1500	93.7	50 x 200	0.2	Open land	Stream crossing	No
1501	93.7	50 x 200	0.2	Open land	Stream crossing	No
1502	94.2	25 x 200	0.1	Open land	Pipeline crossing	No
1503	94.5	25 x 200	0.1	Open land	Pipeline crossing	No
1503A	94.7	50 x 260	0.3	Open land	Spoils for significant PI	No
1508	94.8	50 x 723	0.7	Forest, open land	Stream crossing	No
1510	94.9	35 x 200	0.2	Open land	Pipeline crossing/stream crossing	No
1511	95.0	35 x 200	0.2	Open land	Stream crossing	No
1511A	95.0	50 x 105	0.1	Developed land, open land	Road crossing	No
1511B	95.0	50 x 200	0.2	Open land	Staging area for parking/equipment	No
1512	95.2	50 x 200	0.2	Open land	Stream crossing	No
1513	95.3	50 x 200	0.2	Open land	Stream crossing	No
1515	95.4	50 x 372	0.3	Open land	Pipeline crossing/stream crossing	No
1516	95.5	50 x 200	0.2	Agriculture, open land	Stream crossing	No
1516A	95.7	50 x 190	0.2	Open land	Staging area for parking/equipment	No
1517	95.8	25 x 200	0.1	Agriculture, open land	Pipeline crossing	No
1518	95.9	50 x 200	0.2	Agriculture, developed land	Stream crossing	No
1518A	95.9	50 x 189	0.2	Agriculture	Environmental feature crossing	No
1518B	95.9	50 x 117	0.1	Open land	Pipeline crossing/stream crossing	No
1519	96.0	50 x 173	0.2	Open land	Pipeline crossing/stream crossing/road crossing	No
1520	96.0	50 x 183	0.2	Developed land, open land	Road crossing	No
1520A	96.2	50 x 213	0.2	Forest, open land	Staging area for parking/equipment	No
1521	96.3	50 x 200	0.2	Forest	Stream crossing	No
1522	96.4	50 x 200	0.2	Forest	Stream crossing	No
1523	96.5	50 x 200	0.2	Forest	Stream crossing	No
1523A	96.5	40 x 373	0.3	Forest	Environmental feature crossing	No
1524	96.6	50 x 352	0.4	Forest	Stream crossing	No
1526	96.7	50 x 169	0.2	Forest, open land	Stream crossing	No
1526B	96.7	25 x 111	0.1	Open land	Pipeline crossing	No
1526A	97.1	50 x 150	0.2	Developed land, forest, open land	Road crossing	No
1526C	97.1	50 x 150	0.2	Open land	Road crossing	No
1528	97.2	50 x 200	0.2	Open land	Temporary soil storage	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project *						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1562	105.0	50 x 291	0.3	Open land	Road crossing	No
1563	105.1	50 x 200	0.2	Open land	Road crossing	No
1564	105.5	50 x 150	0.2	Open land	Road crossing	No
1565	105.5	50 x 150	0.2	Open land	Road crossing	No
1565A	105.7	50 x 200	0.3	Open land	Staging area for parking/equipment	No
1565B	105.8	35 x 150	0.1	Open land	Environmental feature crossing	No
1565C	105.8	35 x 150	0.1	Open land	Environmental feature crossing	No
1566	106.1	25 x 200	0.1	Agriculture, open land	Pipeline crossing	No
1566A	106.2	50 x 200	0.3	Open land	Staging area for parking/equipment	No
1567	106.7	25 x 155	0.1	Forest, open land	Road crossing	No
1568	106.7	25 x 125	0.1	Open land	Road crossing	No
1568A	106.8	50 x 138	0.2	Open land	Environmental feature crossing	No
1569	107.2	25 x 215	0.1	Open land	Pipeline crossing	No
1569A	107.5	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1570	107.6	48 x 225	0.2	Forest, open land	Road crossing	No
1571	107.7	50 x 200	0.2	Open land	Road crossing	No
1572	107.7	25 x 200	0.1	Open land	Pipeline crossing	No
1573	108.0	35 x 287	0.2	Open land	Pipeline crossing	No
1574	108.4	50 x 200	0.2	Open land	Stream crossing	No
1575	108.5	50 x 200	0.2	Open land	Stream crossing	No
1575A	108.7	50 x 200	0.2	Open land	Stream crossing	No
1575B	108.7	50 x 200	0.2	Open land	Stream crossing	No
1575C	108.8	50 x 200	0.2	Forest	Stream crossing	No
1575D	108.9	50 x 200	0.2	Open land	Stream crossing	No
1576	109.0	50 x 200	0.2	Forest, open land	Stream crossing	No
1577	109.0	50 x 200	0.2	Forest	Stream crossing	No
1577A	109.2	50 x 200	0.2	Open land	Environmental feature crossing	No
1578	109.3	50 x 200	0.2	Open land	Stream crossing	No
1578A	109.6	50 x 161	0.2	Forest, open land	Environmental feature crossing	No
1578B	109.6	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1578C	109.8	50 x 197	0.2	Open land	Spills for significant PI	No
1578D	109.9	50 x 200	0.2	Open land	Environmental feature crossing	No
1578E	110.0	50 x 150	0.1	Open land	Environmental feature crossing	No
1578F	110.0	35 x 150	0.1	Open land	Environmental feature crossing	No
1578G	110.8	50 x 200	0.2	Open land	Environmental feature crossing	No
1578H	110.9	50 x 175	0.2	Open land	Road crossing	No
5000T	110.9	63 x 170	0.2	Open land, open water	Staging area for parking/equipment	S-CR-RKT- 17/08/28-02
1578J	111.3	50 x 150	0.2	Forest	Environmental feature crossing	No
1578K	111.4	50 x 150	0.2	Forest, open land	Environmental feature crossing	No
1578L	111.8	50 x 200	0.2	Forest, open land	Pipeline crossing/stream crossing	No
1578M	111.8	50 x 169	0.2	Forest, open land	Pipeline crossing/stream crossing	No
1578N	111.8	50 x 150	0.2	Open land	Environmental feature crossing	No
1578O	112.1	50 x 150	0.2	Open land	Environmental feature crossing	No
1578P	112.1	50 x 150	0.2	Agriculture	Environmental feature crossing	No
1579	112.2	50 x 200	0.3	Agriculture	Pipeline crossing	No
1580	112.8	50 x 200	0.2	Open land	Stream crossing	No
1581	112.8	50 x 200	0.2	Agriculture, open land	Stream crossing	No
1581A	113.0	50 x 200	0.2	Agriculture, open land	Stream crossing	No
1581B	113.1	50 x 337	0.4	Open land	Environmental feature crossing	No
1581C	113.2	50x 200	0.2	Open land	Environmental feature crossing	No

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APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project *						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1609	121.5	50 x 200	0.3	Open land	Stream crossing	No
1610	121.7	50 x 200	0.2	Forest	Stream crossing	No
1611	121.8	50 x 200	0.2	Open land	Stream crossing	No
1612	122.0	50 x 151	0.2	Open land	Stream crossing	No
1613	122.1	50 x 200	0.2	Forest, open land	Stream crossing	No
1614	122.3	50 x 200	0.2	Open land	Road crossing	No
1615	122.3	50 x 295	0.4	Open land	Road crossing	No
1616	122.4	50 x 308	0.3	Open land	Road crossing	No
1616A	122.5	50 x 200	0.2	Open land	Environmental feature crossing	No
1616B	122.6	50 x 217	0.3	Open land	Staging area for parking/equipment	No
1616C	122.9	50 x 516	0.5	Agriculture, open land	Pipeline crossing and spoils for significant PI	No
1616D	122.9	50 x 200	0.2	Agriculture, open land	Spoils for significant PI	No
1616E	122.9	50 x 200	0.2	Agriculture, open land	Environmental feature crossing	No
1616F	123.0	50 x 200	0.2	Open land	Environmental feature crossing	No
1616G	123.2	50 x 116	0.1	Forest, open land	Environmental feature crossing	No
1616H	123.3	50 x 217	0.2	Forest	Environmental feature crossing	No
1616J	123.4	50 x 115	0.1	Forest, open land	Stream crossing	No
1616K	123.4	50 x 150	0.2	Forest, open land	Environmental feature crossing	No
1616L	123.5	50 x 200	0.2	Forest, open land	Spoils for significant PI	No
1616M	123.9	50 x 200	0.2	Open land	Spoils for significant PI	No
1617	124.2	50 x 200	0.2	Open land	Stream crossing	No
1618	124.3	50 x 200	0.2	Open land	Stream crossing	No
1618A	124.4	50 x 200	0.2	Open land	Environmental feature crossing and spoils for significant PI	No
1619	124.5	52 x 412	0.5	Forest, open land	Road crossing	No
1620	124.6	77 x 150	0.3	Forest, open land	Road crossing and pipeline crossing	No
1620A	124.7	50 x 200	0.2	Open land	Spoils for significant PI	No
1620B	124.8	50 x 367	0.4	Forest, open land, open water	Pipeline crossing/stream crossing	S-CR-LAG- 17/01/05- 02, S-JO- LAG- 17/06/29-01
1620C	124.8	50 x 200	0.3	Forest, open land, open water	Environmental feature crossing and spoils for significant PI	S-CR-LAG- 17/06/29-01
1621	124.9	50 x 200	0.2	Forest, open water	Pipeline crossing	S-CR-LAG- 17/01/05- 02b, S-CR- LAG- 17/01/05-02
1622	124.9	100 x 150	0.4	Developed land, forest, open land	Road crossing and pipeline crossing	No
1623	125.0	186 x 154	0.6	Developed land, open land	Road crossing	No
1624	125.1	126 x 250	0.5	Developed land, open land	Road crossing and pipeline crossing	No
1625	125.3	50 x 178	0.2	Open land	Pipeline crossing	No
1625A	125.4	50 x 150	0.2	Agriculture	Road crossing	No
1625B	125.6	50 x 200	0.2	Agriculture, open land	Environmental feature crossing	No
1625C	125.7	50 x 200	0.2	Open land	Environmental feature crossing	No
1626	126.0	113 x 150	0.4	Open land	Road crossing	No
1627	126.1	135 x 150	0.5	Developed land, open land	Road crossing	No
1628	126.1	50 x 430	0.5	Open land	Wetland crossing	No
1627A	126.1	61 x 254	0.4	Developed land, open land	Water access for hydrostatic testing	S-CR-LAG- 17/01/05-89

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1661E	133.1	50 x 200	0.2	Open land	Environmental feature crossing	No
1661F	133.2	50 x 200	0.2	Open land	Environmental feature crossing	No
1662	133.4	25 x 304	0.2	Open land	Pipeline crossing	No
1662A	133.6	25 x 93	0.1	Open land	Road crossing	No
1662B	133.6	50 x 200	0.3	Forest, open land	Road crossing	No
1662C	133.9	50 x 200	0.2	Forest	Stream crossing	No
1662D	133.9	50 x 200	0.2	Forest	Stream crossing	No
1663	134.0	50 x 255	0.2	Forest, open land	Stream crossing	No
1663A	134.0	50 x 400	0.4	Forest, open land	Pipeline crossing and spoils for significant PI	No
1664	134.2	50 x 357	0.3	Forest, open land	Stream crossing	No
1663B	134.2	50 x 400	0.4	Forest, open land	Pipeline crossing and spoils for significant PI	No
1664A	134.7	50 x 200	0.2	Open land	Spoils for significant PI	No
1664B	134.7	50 x 163	0.2	Agriculture, open land	Road crossing	No
1664C	134.8	25 x 200	0.1	Agriculture	Pipeline crossing	No
1664D	135.1	40 x 432	0.3	Agriculture	Spoils for significant PI	No
1664E	135.1	50 x 350	0.4	Agriculture, open land	Spoils for significant PI	No
1665	135.7	100 x 200	0.5	Open land	HDD – Washita River	No
1666	136.1	100 x 200	0.5	Agriculture	HDD – Washita River	No
1665B	136.1	123 x 142	0.4	Agriculture, developed land	Pipeline crossing	No
1667	136.3	50 x 200	0.2	Open land	Stream crossing	No
1667A	136.4	50 x 200	0.2	Open land	Environmental feature crossing	No
1668	136.5	100 x 150	0.3	Open land	Road crossing	No
1667B	136.5	100 x 253	0.6	Forest, open land	Stream crossing	No
1669	136.8	25 x 429	0.3	Forest, open land	Stream crossing	No
1670	136.9	50 x 311	0.2	Forest, open land	Stream crossing	No
1671	137.1	50 x 200	0.2	Forest, open land	Pipeline crossing	No
1671A	137.2	50 x 136	0.2	Forest	Environmental feature crossing	No
1671B	138.2	50 x 400	0.5	Forest, open land	Pipeline crossing and spoils for significant PI	No
1671C	138.2	40 x 281	0.2	Open land	Pipeline crossing and spoils for significant PI	No
1671D	138.6	50 x 200	0.3	Developed land, open land	Staging area for parking/equipment	No
1672	138.7	25 x 200	0.1	Open land	Pipeline crossing	No
Johnston						
1673	139.4	50 x 200	0.2	Forest, open land	Pipeline crossing	No
1673A	139.5	50 x 200	0.2	Forest	Environmental feature crossing	No
1674	140.0	50 x 150	0.2	Open land	Pipeline crossing	No
1675	140.1	50 x 390	0.5	Open land	Pipeline crossing	No
1675A	140.1	50 x 193	0.1	Open land	Pipeline crossing and spoils for significant PI	No
1675B	140.2	50 x 200	0.2	Open land	Environmental feature crossing	No
1675C	140.3	50 x 200	0.2	Open land	Environmental feature crossing	No
1676	140.4	50 x 250	0.3	Open land	Pipeline crossing	No
1676A	140.6	50 x 200	0.2	Developed land, forest, open land	Road crossing	No
1676B	140.8	50 x 200	0.2	Open land	Environmental feature crossing	No
1676C	140.9	50 x 200	0.2	Open land	Stream crossing	No
1676D	141.0	50 x 350	0.4	Open land	Stream crossing	No
1676E	141.1	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1676F	141.2	50 x 150	0.2	Forest	Environmental feature crossing	No
1676G	141.3	50 x 200	0.3	Forest	Environmental feature crossing	No
1676H	141.3	50 x 200	0.2	Forest	Environmental feature crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1686B	147.6	50 x 200	0.3	Open land	Staging area for parking/equipment	No
1687	148.0	50 x 139	0.2	Forest, open land	Pipeline crossing	No
1687A	148.0	96 x 151	0.3	Forest, open land	Pipeline crossing/stream crossing	No
1687B	148.2	50 x 200	0.2	Forest	Environmental feature crossing	No
1687C	148.3	50 x 225	0.3	Forest	Environmental feature crossing and spoils for significant PI	No
1687D	148.4	50 x 200	0.2	Forest	Road crossing	No
1687E	148.5	50 x 200	0.2	Forest, open land	Stream crossing	No
1687F	148.5	50 x 200	0.2	Forest, open land	Stream crossing	No
1687G	148.6	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1687H	148.7	50 x 200	0.2	Forest	Environmental feature crossing	No
1687J	148.8	50 x 200	0.2	Forest	Stream crossing	No
1687K	148.9	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1688	149.0	50 x 140	0.2	Open land	Pipeline crossing	No
1688A	149.1	50 x 200	0.2	Open land	Environmental feature crossing	No
1688B	149.2	50 x 200	0.2	Open land	Staging area for parking/equipment	No
1688C	149.3	50 x 103	0.1	Open land	Environmental feature crossing	No
1689	149.5	100 x 150	0.4	Agriculture, forest, open land	Pipeline crossing	No
1690	149.6	100 x 150	0.4	Open land	Road crossing	No
1691	149.9	50 x 150	0.3	Open land	Road crossing	No
1692	149.9	40 x 200	0.2	Developed land, forest, open land	Pipeline crossing	No
1693	149.9	50 x 200	0.3	Forest, open land	Road crossing	No
1694	150.1	50 x 180	0.2	Forest	Road crossing	No
1695	150.1	50 x 218	0.2	Open land	Road crossing	No
1696	150.3	50 x 200	0.2	Forest	Stream crossing	No
1697	150.3	50 x 210	0.2	Open land	Stream crossing	No
1698	150.6	50 x 200	0.2	Forest, open land	Wetland crossing	No
1699	150.7	50 x 200	0.2	Forest, open land	Wetland crossing	No
1699A	151.1	30 x 1131	0.8	Developed land, forest, open land, open water, residential	False row required for pull- back string for Rock Creek HDD	S-JO-LAG- 17/01/10-08
1699B	151.2	50 x 200	0.2	Open land	Spoils for significant PI	No
1699C	151.3	40 x 425	0.4	Forest, open land	Environmental feature crossing	No
1699D	151.5	130 x 200	0.6	Developed land, forest	HDD – Rock Creek	No
1701	152.1	130 x 200	0.6	Forest, open land	Road crossing and pipeline crossing	No
1702	152.6	50 x 200	0.2	Open land	Stream crossing	No
1703	152.6	50 x 211	0.2	Forest, open land	Stream crossing	No
1704	152.8	50 x 200	0.2	Forest	Road crossing	No
1705	152.8	50 x 200	0.2	Forest, open land	Road crossing and pipeline crossing	No
1706	153.1	50 x 200	0.2	Forest	Road crossing	No
1707	153.3	50 x 293	0.4	Open land	Road crossing	No
1708	153.6	113 x 1057	2.7	Forest, open land, open water	False row required for pull- back string for Pennington HDD	S-JO-AJF- 17/01/11- 02, S-JO- LAG- 17/01/11-01
1709	153.9	100 x 200	0.5	Open land	Stream crossing	No
1710	154.4	50 x 305	0.4	Forest, open land	HDD – Pennington Creek	No
1710A	154.3	40 x 240	0.2	Residential	HDD – Pennington Creek	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project *						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1737A	181.9	50 x 185	0.2	Agriculture	Staging area for parking/equipment	No
1738	182.0	50 x 445	0.5	Agriculture, developed land	Wetland crossing	No
1739	182.1	50 x 200	0.2	Open land	Road crossing	No
1740	182.2	50 x 200	0.2	Forest, open land	Stream crossing	No
1741	182.3	50 x 200	0.2	Open land	Stream crossing	No
1741A	182.9	50 x 200	0.2	Open land	Environmental feature crossing and spoils for significant PI	No
1741B	183.0	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1741C	183.2	25 x 200	0.1	Forest	Environmental feature crossing	No
1741D	183.3	25 x 200	0.1	Forest	Environmental feature crossing	No
1742	183.4	50 x 173	0.2	Open land	Road crossing	No
1743	183.4	50 x 225	0.2	Agriculture, forest	Road crossing	No
1743A	183.5	50 x 238	0.3	Agriculture	Spoils for significant PI	No
1743B	183.6	50 x 200	0.2	Agriculture	Road crossing	No
1744	183.9	50 x 200	0.2	Agriculture, forest	Road crossing	No
1745	184.0	50 x 187	0.2	Forest, open land	Road crossing	No
1746	184.2	50 x 200	0.2	Open land	Stream crossing	No
1747	184.3	50 x 200	0.2	Open land	Stream crossing	No
1747A	184.7	50 x 200	0.2	Open land	Environmental feature crossing	No
1747B	184.8	50 x 200	0.2	Open land	Environmental feature crossing	No
1748	184.9	50 x 245	0.3	Open land	Road crossing	No
1749	184.9	50 x 242	0.3	Agriculture	Road crossing	No
1750	185.1	50 x 200	0.2	Agriculture	Road crossing	No
1751	185.1	50 x 211	0.2	Open land	Road crossing	No
1752	186.4	50 x 215	0.2	Open land	Road crossing	No
1753	186.5	50 x 200	0.2	Open land	Road crossing	No
1753A	186.9	35 x 200	0.2	Open land	Stream crossing	No
1754	187.1	50 x 150	0.2	Open land	Road crossing	No
1755	187.2	50 x 150	0.2	Open land	Road crossing	No
1756	187.4	50 x 150	0.2	Open land	Road crossing	No
1757	187.4	50 x 125	0.2	Open land	Road crossing	No
1759	188.6	25 x 523	0.3	Forest, open land	Pipeline crossing	No
1760	188.7	25 x 337	0.2	Open land	Pipeline crossing	No
1761	189.5	50 x 200	0.2	Forest	Stream crossing	No
1762	189.5	50 x 200	0.2	Open land	Stream crossing	No
1763	189.6	50 x 138	0.2	Forest, open land	Road crossing	No
1764	189.6	50 x 125	0.2	Forest	Road crossing	No
1765	189.8	50 x 150	0.2	Forest	Stream crossing	No
1766	189.9	50 x 264	0.3	Forest	Stream crossing	No
1767	170.0	50 x 200	0.2	Forest	Stream crossing	No
Bryan						
1767A	170.4	50 x 200	0.2	Open land	Environmental feature crossing	No
1768	170.5	50 x 200	0.2	Open land	Stream crossing	No
1769	170.7	50 x 125	0.2	Open land	Stream crossing	No
1770	170.8	50 x 184	0.2	Agriculture, open land	Stream crossing/road crossing	No
1769B	170.8	50 x 200	0.3	Agriculture	Spoils for significant PI	No
1771	170.9	50 x 150	0.2	Agriculture	Road crossing	No
1772	171.6	86 x 150	0.3	Forest, open land	Road crossing	No
1773	171.6	92 x 232	0.4	Open land	Road crossing	No
1774	171.7	50 x 203	0.2	Open land	Stream crossing	No
1775	171.8	50 x 200	0.2	Forest	Stream crossing	No
1776	171.9	50 x 80	0.1	Forest	Stream crossing	No
1776A	171.9	50 x 85	0.1	Forest	Stream crossing	No
1777	172.0	50 x 353	0.4	Forest, open land	Road crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project *						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^a
1801B	179.9	50 x 200	0.2	Open land	Environmental feature crossing	No
1801C	180.1	50 x 200	0.2	Open land	Environmental feature crossing	No
1801D	180.2	50 x 200	0.2	Open land	Environmental feature crossing	No
1802	180.7	89 x 222	0.4	Open land	Railroad crossing	No
1803	180.8	80 x 220	0.4	Forest, open land	Railroad crossing	No
1803A	180.9	50 x 200	0.2	Forest, open land	Stream crossing	No
1804	181.0	50 x 200	0.3	Open land	Pipeline crossing	No
1803B	181.0	50 x 200	0.3	Forest, open land	Stream crossing	No
1804A	181.5	50 x 200	0.3	Open land, residential	Spills for significant PI	No
1805	181.6	50 x 500	0.6	Forest, open land	Road crossing	No
1804B	181.6	50 x 200	0.2	Residential	Road crossing	No
1805A	181.7	50 x 200	0.2	Open land	Environmental feature crossing	No
1806	181.9	50 x 200	0.2	Forest, open land	Road crossing	No
1807	182.0	50 x 188	0.2	Open land	Road crossing	No
1808	182.5	50 x 200	0.2	Forest, open land	Stream crossing	No
1809	182.6	50 x 200	0.2	Forest, open land	Stream crossing	No
1810	182.7	50 x 153	0.2	Open land	Road crossing	No
1811	182.8	50 x 346	0.4	Open land	Road crossing	No
1811A	182.9	50 x 200	0.2	Open land	Environmental feature crossing	No
1811B	183.3	50 x 200	0.2	Open land	Environmental feature crossing	No
1811C	183.4	50 x 200	0.2	Forest, open land	Environmental feature crossing	No
1812	184.0	50 x 150	0.2	Open land	Road crossing	No
1813	184.0	50 x 352	0.4	Open land	Road crossing	No
1813A	184.1	50 x 200	0.2	Open land	Stream crossing	No
1814	184.5	50 x 150	0.2	Open land	Road crossing	No
1815	184.5	50 x 45	0.1	Open land	Road crossing	No
1815A	184.8	50 x 150	0.2	Open land	Environmental feature crossing	No
1815B	185.0	50 x 200	0.2	Agriculture	Environmental feature crossing	No
1815C	185.5	25 x 200	0.1	Forest, open land	Stream crossing	No
1815D	185.6	25 x 200	0.1	Open land	Stream crossing	No
1816	186.0	50 x 200	0.2	Agriculture, forest	Stream crossing	No
1817	186.2	50 x 200	0.2	Open land	Stream crossing	S-BR-TAS- 17/01/12- 97b
1817A	186.7	50 x 200	0.2	Open land	Environmental feature crossing	No
1817B	186.8	50 x 200	0.2	Open land	Environmental feature crossing	No
1818	187.0	25 x 100	0.1	Open land	Wetland crossing/stream crossing	No
1819	187.0	25 x 100	0.1	Open land	Wetland crossing/stream crossing	No
1820	187.6	50 x 150	0.2	Open land	Road crossing	No
1821	187.7	50 x 150	0.2	Forest, open land	Road crossing	No
1822	188.0	50 x 200	0.2	Forest, open land	Road crossing	No
1823	188.0	50 x 340	0.4	Forest, open land	Road crossing	No
1824	188.3	50 x 162	0.2	Open land	Road crossing	No
1825	188.3	50 x 150	0.2	Forest, open land	Road crossing	No
1826	188.9	50 x 150	0.2	Forest	Road crossing	No
1827	188.9	50 x 150	0.2	Open land	Road crossing	No
1828	189.0	50 x 150	0.2	Forest, open land	Road crossing	No
1829	189.0	50 x 185	0.2	Open land	Road crossing	No
1830	190.0	100 x 180	0.4	Open land	Road crossing	No
1831	190.1	52 x 346	0.4	Open land	Road crossing	No
1831A	190.2	25 x 171	0.1	Residential	Stream crossing	No
1831B	190.5	50 x 200	0.2	Open land	Spills for significant PI	No
1831C	190.8	50 x 200	0.2	Forest, open land	Environmental feature crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
1851G	198.5	442 x 653	6.8	Open Land	Compressor station	No
1851H	198.5	84 x 385	0.7	Open land	Compressor station	No
1851F	199.0	50 x 200	0.3	Agriculture	Pipeline crossing and spoils for significant PI	No
1854	199.1	50 x 150	0.2	Agriculture, developed land	Road crossing	No
1855	199.1	50 x 150	0.2	Open land	Road crossing	No
1856	199.2	50 x 200	0.2	Forest, open land	Wetland crossing	No
1857	199.3	50 x 200	0.2	Forest, open land	Wetland crossing	No
1858	199.6	50 x 620	0.8	Open land	Pipeline crossing	No
Subtotal			318.5			
CHISHOLM LATERAL						
Kingfisher						
2000A	CH0.0	50 x 305	0.4	Agriculture	Meter station construction	No
2000	CH0.1	50 x 150	0.2	Agriculture, open land	Road crossing	No
2001	CH0.2	50 x 354	0.5	Agriculture	Road crossing and pipeline crossing	No
2002	CH0.2	50 x 150	0.2	Open land	Road crossing and pipeline crossing	No
2003	CH0.3	25 x 200	0.1	Open land	Pipeline crossing	No
2004	CH1.2	50 x 150	0.2	Open land	Road crossing	No
2005	CH1.2	50 x 285	0.3	Open land	Pipeline crossing/road crossing/stream crossing	No
2006	CH1.3	50 x 150	0.2	Open land	Stream crossing	No
2006A	CH1.8	50 x 150	0.2	Agriculture, developed land	Road crossing	No
2007	CH2.1	50 x 282	0.4	Agriculture, open land	Road crossing	No
2008	CH2.2	50 x 361	0.5	Agriculture, open land	Road crossing	No
2009	CH2.4	25 x 200	0.1	Agriculture	Pipeline crossing	No
2010	CH2.6	50 x 197	0.2	Agriculture	Pipeline crossing	No
2010A	CH2.7	50 x 210	0.2	Agriculture	Spoils for significant PI	No
2011	CH2.9	50 x 150	0.2	Agriculture	Temporary soil storage	No
2012	CH2.9	50 x 330	0.4	Agriculture, open land	Temporary soil storage	No
2013	CH3.2	50 x 150	0.2	Open land	Road crossing	No
2014	CH3.3	50 x 244	0.3	Open land	Road crossing and pipeline crossing	No
2015	CH3.4	50 x 200	0.2	Open land	Stream crossing	No
2016	CH3.5	50 x 200	0.2	Open land	Stream crossing	No
2017	CH3.9	50 x 200	0.2	Agriculture	Stream crossing	No
2018	CH3.9	50 x 200	0.2	Agriculture	Pipeline crossing/stream crossing	No
2019	CH4.1	50 x 200	0.2	Agriculture	Stream crossing	No
2020	CH4.2	50 x 200	0.2	Agriculture	Stream crossing	No
2021	CH4.3	50 x 200	0.2	Agriculture	Stream crossing	No
2022	CH4.4	50 x 200	0.2	Agriculture	Stream crossing	No
2023	CH5.0	50 x 150	0.2	Agriculture	Temporary soil storage	No
2024	CH5.1	50 x 150	0.2	Agriculture	Temporary soil storage	No
2025	CH5.2	50 x 150	0.2	Agriculture, open land	Road crossing	No
2026	CH5.2	50 x 150	0.2	Agriculture, open land	Road crossing	No
2027	CH5.7	55 x 265	0.3	Agriculture, open land	Pipeline crossing	No
2028	CH5.9	50 x 200	0.2	Agriculture, open land	Stream crossing	No
2029	CH5.9	50 x 219	0.3	Agriculture, developed land	Stream crossing	No
2030	CH6.0	50 x 331	0.4	Agriculture, open land	Pipeline crossing	No
2031	CH6.1	50 x 244	0.3	Agriculture, open land	Stream crossing	No
2032	CH6.2	50 x 200	0.2	Forest, open land	Stream crossing	No
2033	CH6.3	25 x 195	0.1	Open land	Road crossing	No
2034	CH6.3	50 x 257	0.4	Developed land, open land	Road crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
2078	CH12.7	100 x 200	0.5	Agriculture, open land	Pipeline crossing/railroad crossing/road crossing	No
2078A	CH12.8	50 x 200	0.2	Agriculture	Pipeline crossing	No
2078B	CH13.3	50 x 150	0.2	Agriculture, open land	Environmental feature crossing	No
2078C	CH13.4	50 x 150	0.2	Open land	Environmental feature crossing	No
2079	CH13.6	50 x 150	0.2	Agriculture, open land	Road crossing	No
2080	CH13.7	50 x 150	0.2	Agriculture, open land	Road crossing	No
2081	CH14.2	25 x 200	0.1	Agriculture	Pipeline crossing	No
2082	CH14.6	50 x 182	0.2	Open land	Road crossing	No
2081A	CH14.8	50 x 150	0.2	Open land	Environmental feature crossing	No
2083	CH14.7	50 x 344	0.4	Open land	Road crossing and pipeline crossing	No
2085	CH14.8	50 x 150	0.2	Agriculture, open land	Road crossing	No
2086	CH15.1	25 x 140	0.1	Agriculture	Pipeline crossing	No
2086A	CH15.1	25 x 43	<0.1	Agriculture	Temporary soil storage	No
2087	CH15.2	50 x 150	0.2	Agriculture, open land	Stream crossing	No
2088	CH15.3	50 x 150	0.2	Open land	Stream crossing	No
2089	CH15.6	50 x 200	0.2	Open land	Wetland crossing/road crossing	No
2090	CH15.7	50 x 132	0.2	Developed land, open land	Wetland crossing	No
2091	CH15.8	50 x 150	0.2	Agriculture	Road crossing	No
2092	CH16.3	50 x 200	0.2	Open land	Stream crossing	No
2093	CH16.4	50 x 200	0.2	Agriculture	Stream crossing	No
2093A	CH16.5	50 x 339	0.4	Agriculture	Spoils for significant PI	No
2093B	CH16.5	50 x 277	0.3	Agriculture	Spoils for significant PI	No
2094	CH17.1	25 x 200	0.1	Agriculture	Pipeline crossing	No
2095	CH17.3	25 x 200	0.1	Agriculture	Pipeline crossing	No
2096	CH17.8	50 x 150	0.2	Agriculture, open land	Road crossing	No
2097	CH17.9	50 x 150	0.2	Agriculture	Road crossing	No
2098	CH18.1	50 x 379	0.4	Agriculture	Pipeline crossing	No
2099	CH18.2	50 x 150	0.2	Open land	Road crossing	No
2100	CH18.3	50 x 150	0.2	Open land	Road crossing	No
2100A	CH18.5	35 x 200	0.2	Agriculture	Stream crossing	No
2100B	CH18.6	35 x 200	0.2	Open land	Stream crossing	No
2101	CH18.9	35 x 150	0.1	Agriculture	Temporary soil storage	No
2103	CH19.2	50 x 200	0.2	Open land	Stream crossing	No
2104	CH19.3	50 x 297	0.4	Open land	Road crossing and pipeline crossing	No
2105	CH19.3	50 x 150	0.2	Open land	Road crossing	No
2105A	CH19.8	50 x 394	0.4	Agriculture, open land	Spoils for significant PI	No
2108	CH19.9	50 x 200	0.2	Agriculture, open land	Stream crossing	No
2109	CH19.9	50 x 200	0.2	Open land	Stream crossing	No
2110	CH20.3	50 x 250	0.2	Agriculture	Pipeline crossing	No
2110A	CH20.4	50 x 200	0.3	Agriculture	Road crossing and pipeline crossing	No
Subtotal			27.2			
VELMA LATERAL						
Stephens						
3000	VE0.0	25 x 196	0.1	Developed land, open land	Temporary soil storage	No
3001	VE0.1	25 x 278	0.2	Open land	Temporary soil storage	No
3002	VE0.2	25 x 560	0.3	Forest, open land, open water	Stream crossing and facility construction	S-ST-WCR-17/04/11-01
3002A	VE0.2	25 x 209	0.1	Forest, open land	Environmental feature crossing and spoils for significant PI	No
3003	VE0.3	25 x 100	0.1	Forest, open land	Stream crossing	No

APPENDIX D (cont'd)						
Additional Temporary Workspace (ATWS) Associated with Construction of the Midcontinent Supply Header Interstate Pipeline Project ^a						
Project Facility/ County/ ATWS ID	Mile- post	Dimensions (feet) ^b	Area (acres) ^b	Land Use	Justification for ATWS	Within 50 Feet of Wetland or Waterbody ^c
3036	VE8.1	25 x 356	0.2	Forest, open land	Pipeline crossing	No
3037	VE8.2	25 x 144	0.1	Forest, open land	Pipeline crossing	No
3038	VE8.3	25 x 318	0.2	Forest, open land	Pipeline crossing	No
3038A	VE8.4	25 x 545	0.3	Forest, open land	Pipeline crossing	No
3038B	VE8.5	25 x 123	0.1	Forest, open land	Pipeline crossing	No
3038C	VE8.5	25 x 499	0.3	Developed land, forest, open land	Pipeline crossing	No
3038D	VE8.8	25 x 283	0.2	Open land	Pipeline crossing	No
3039	VE8.7	25 x 91	0.1	Open land	Pipeline crossing	No
3039A	VE8.7	25 x 128	0.1	Developed land, open land	Pipeline crossing	No
3040	VE8.8	25 x 237	0.1	Developed land, open land	Pipeline crossing	No
3041	VE8.8	25 x 165	0.1	Open land	Pipeline crossing	No
3042	VE8.9	25 x 197	0.1	Open land	Pipeline crossing	No
3043	VE7.0	25 x 430	0.3	Open land	Road crossing, pipeline crossing, and PI	S-ST-RFT- 17/04/10-13
3044	VE7.1	25 x 314	0.2	Open land	Road crossing and pipeline crossing	No
3045	VE7.2	25 x 135	0.1	Open land	Road crossing	No
3046	VE7.2	25 x 111	0.1	Open land	Road crossing	No
3047	VE7.4	25 x 130	0.1	Open land	Pipeline crossing and spoils for significant PI	No
3048	VE7.4	25 x 240	0.2	Forest, open land	Spoils for significant PI	No
3049	VE7.6	25 x 100	0.1	Forest	Stream crossing	No
3050	VE7.7	25 x 100	0.1	Open land	Stream crossing	No
3051	VE7.7	25 x 150	0.1	Developed land, open land	Temporary soil storage	No
3052	VE7.8	25 x 200	0.1	Forest, open land	Temporary soil storage	No
3053	VE7.9	25 x 200	0.1	Forest, open land	Temporary soil storage	No
3053A	VE8.2	25 x 100	0.1	Forest	Temporary soil storage	No
3053B	VE8.3	25 x 100	0.1	Forest	Temporary soil storage	No
3054	VE8.4	25 x 129	0.1	Developed land, forest	Road crossing	No
Carter						
3055	VE8.4	25 x 158	0.1	Developed land, open land	Road crossing	No
3056	VE8.6	25 x 253	0.2	Open land	Pipeline crossing and spoils for significant PI	No
3057	VE8.9	25 x 552	0.3	Developed land, forest, open land	Pipeline crossing	No
3057A	VE9.0	825 x 200	0.1	Developed land, forest, open land	Pipeline crossing	No
3057B	VE9.1	25 x 200	0.1	Forest, open land	Pipeline crossing	No
3058	VE9.2	25 x 260	0.2	Forest, open land	Wetland crossing	No
3059	VE9.4	75 x 145	0.3	Open land	HDD PFO and road crossing	No
3061	VE9.5	10 x 145	0.0	Open land	HDD PFO and road crossing	No
3062	VE9.5	65 x 160	0.3	Open land	HDD PFO and road crossing	No
3063	VE9.7	25 x 239	0.1	Open land	Pipeline crossing	No
3063A	VE9.8	100 x 100	0.2	Forest, open land, open water	Water access for hydrostatic testing	S-CR-WCR- 17/10/27-01
3066	VE10.7	25 x 100	0.1	Forest, open land	Stream crossing	No
3067	VE10.7	25 x 100	0.1	Agriculture, developed land	Stream crossing	No
3068	VE10.7	50 x 200	0.2	Agriculture, developed land	Pipeline crossing and parking/equipment	No
3070	VE10.8	25 x 150	0.1	Agriculture	Spoils for significant PI	No
3071	VE11.0	25 x 100	0.1	Agriculture	Temporary soil storage	No
3071A	VE11.1	25 x 100	0.1	Developed land, open land	Stream crossing	No
3073	VE11.4	50 x 209	0.2	Developed land, open land	HDD, road, and resource crossing	No

APPENDIX E

TEMPORARY AND PERMANENT ACCESS ROADS ASSOCIATED WITH THE MIDCONTINENT SUPPLY HEADER INTERSTATE PIPELINE PROJECT

APPENDIX E										
Temporary and Permanent Access Roads Associated with the Midcontinent Supply Header Interstate Pipeline Project										
Facility/County/ Road ID	Milepost	Length (feet)	Acres	New or Existing	Existing Road Type	Perm./ Temp.	Approx. Existing Width (feet)	Construction Width (feet)	Reason for Use ^a	Proposed Improvements ^b
MANLINE										
Canadian										
TAR-15A	15.8	1,005	0.6	New	Agriculture	Temp.	0	25	D, F	3
Grady										
TAR-15	31.1	1,117	0.7	Existing	Gravel oil and gas lease road	Temp.	15	25	A, D, F	1, 2, 3
		375	0.2	New	Agriculture		0	25		
TAR-16	32.5	2,830	1.3	Existing	Gravel wind farm lease road	Temp.	15	20	E, F, H	1
TAR-17	34.6	2,441	1.4	Existing	Unimproved two-track/field road	Temp.	15	25	A, D, F, H	1, 2
TAR-18	36.5	37	<0.1	Existing	Unimproved two-track/field road	Temp.	15	27	D, F	2
TAR-20	37.3	3,502	2.0	Existing	Gravel wind farm lease road	Temp.	25	25	C, D, F	1
TAR-21	39.1	1,229	0.8	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	2
TAR-22	44.4	2,089	1.2	Existing	Gravel	Temp.	20	25	D, F	1
TAR-23	49.1	1,458	0.9	Existing	Unimproved two-track/field road	Temp.	15	28	A, B, D, F	1, 2
TAR-23A	52.3	141	0.1	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2, 3
TAR-26	53.7	3,397	2.0	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-30	59.1	618	0.4	Existing	Unimproved two-track/field road	Temp.	15	25	A, D, F	1, 2
TAR-15B	60.5	316	0.2	New	Open land	Temp.	0	25	D, F	3
TAR-30A	63.6	200	0.1	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2, 3
TAR-34	65.6	1,349	0.8	Existing	Gravel oil and gas lease road	Temp.	20	25	D, F	1
		256	0.2	New	Open land	Temp.	0	25	D, F	1, 2
TAR-35	66.5	3,346	1.9	Existing	Gravel oil and gas lease road	Temp.	15	25	A, E, F	1
		64	<0.1	New	Open land	Temp.	0	25	D, F	1, 2
TAR-36	67.1	1,360	0.8	Existing	Gravel to unimproved two-track	Temp.	15	25	A, F	1, 2
TAR-39A	68.9	5,257	3.0	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F, H	1
TAR-41	71.1	1,054	0.6	Existing	Unimproved two-track/field road	Temp.	15	25	A, D, F	1, 2
TAR-43	74.3	3,780	2.2	Existing	Gravel oil and gas lease road	Temp.	15	25	B, E, F	1
TAR-44	75.4	2,909	1.7	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F	1
TAR-45A	76.3	6,962	4.0	Existing	Gravel oil and gas lease road to unimproved two-track	Temp.	15	25	A, E, F, H	1, 2
TAR-45C	76.7	2,380	1.4	Existing	Gravel oil and gas lease road	Temp.	15	25	A, E, F, H	1
TAR-45D	76.8	489	0.3	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F, H	1
TAR-46	77.9	3,229	1.9	Existing	Gravel oil and gas lease road	Temp.	15	25	A, E, F, H	1

APPENDIX E (cont'd)										
Temporary and Permanent Access Roads Associated with the Midcontinent Supply Header Interstate Pipeline Project										
Facility/County/ Road ID	Milepost	Length (feet)	Acres	New or Existing	Existing Road Type	Perm./ Temp.	Approx. Existing Width (feet)	Construction Width (feet)	Reason for Use ^a	Proposed Improvements ^b
TAR-71A	102.5	2,453	1.4	Existing	Gravel oil and gas lease road	Temp.	15	25	D, F	1
TAR-72	103.2	357	0.2	Existing	Gravel oil and gas lease road	Temp.	15	25	D, F	1
TAR-73	103.4	323	0.2	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-74	104.1	691	0.4	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-75	105.6	601	0.4	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-76	106.2	2,107	1.2	Existing	Gravel to unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-77	110.9	7,438	4.3	Existing	Gravel to unimproved two-track/field road	Temp.	15	25	E, F, H	1
TAR-77A	110.9	688	0.4	Existing	Gravel to unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-80	122.6	349	0.2	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-81	124.0	3,155	1.8	Existing	Gravel oil and gas lease road	Temp.	15	25	A, E, F, H	1
TAR-82	125.0	72	0.1	Existing	Gravel oil and gas lease road	Temp.	15	25	D, F	1, 2
TAR-83	125.1	679	0.4	Existing	Gravel oil and gas lease road	Temp.	20	25	D, F	1, 2
TAR-84	125.9	475	0.3	Existing	Gravel oil and gas lease road	Temp.	20	25	B, E, F	1, 2
TAR-85	126.1	447	0.3	Existing	Gravel oil and gas lease road	Temp.	20	25	B, E, F	1, 2
TAR-86	126.4	1,398	0.8	Existing	Unimproved two-track/field road	Temp.	15	25	D, F	1, 2
TAR-88	132.4	1,134	0.7	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F, H	1, 2
TAR-89	134.8	2,943	1.8	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F, H	1, 2
TAR-90	136.0	5,355	3.1	Existing	Gravel oil and gas lease road	Temp.	15	25	A, E, F, H	1
TAR-91	138.7	4,422	2.6	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F, H	1
Johnston										
TAR-92	140.0	2,405	1.4	Existing	Gravel oil and gas lease road	Temp.	15	25	E, F, H	1
TAR-92D	143.8	6,181	3.6	Existing	Gravel oil and gas lease road	Temp.	15	25	D, F	1
TAR-92C	144.2	7,939	4.5	Existing	Unimproved two-track/field road	Temp.	15	25	B, D, F	1, 2
TAR-92A	144.8	10,002	5.8	Existing	Gravel utility access road	Temp.	15	25	D, F	1
TAR-92B	147.6	3,945	2.3	Existing	Gravel utility access road	Temp.	20	25	D, F	1, 2
TAR-95	149.2	1,235	0.7	Existing	Unimproved two-track/field road	Temp.	15	25	B, E, F, H	1

APPENDIX E (cont'd)										
Temporary and Permanent Access Roads Associated with the Midcontinent Supply Header Interstate Pipeline Project										
Facility/County/ Road ID	Milepost	Length (feet)	Acres	New or Existing	Existing Road Type	Perm./ Temp.	Approx. Existing Width (feet)	Construction Width (feet)	Reason for Use ^a	Proposed Improvements ^b
Carter/Garvin										
TAR-68C	VE10.7	2,357	1.4	Existing	Gravel oil and gas lease road	Temp.	20	25	D, F	1, 2
Sub-Total		12,010	6.9							
FACILITIES										
BENNINGTON COMPRESSOR STATION										
Bryan										
PAR-68C	198.5	140	0.1	New	Open land	Perm.	0	25	G	1, 4
BENNINGTON METER STATION										
Bryan										
PAR-68B	199.6	12	<0.1	New	Open land	Perm.	0	25	G	1, 4
CALUMET COMPRESSOR STATION										
Canadian										
PAR-14	17.5	21	<0.1	New	Open land	Perm.	0	20	G	1, 4
PAR-15	17.5	12	<0.1	New	Open land	Perm.	0	20	G	1, 4
CANA METER STATION										
Canadian										
PAR-2A	TP0.0	558	0.3	Existing	Existing gas facility road	Perm.	15	20	G	1, 4
CANADIAN VALLEY METER STATION										
Canadian										
PAR-2	10.7	68	<0.1	New	Open land	Perm.	0	20	G	1, 4
CHISHOLM METER STATION										
Kingfisher										
PAR-1	CH0.0	70	<0.1	New	Open land	Perm.	0	20	G	1, 4
GRADY METER STATION										
Garvin										
PAR-47	79.1	4,307	2.5	Existing	Gravel oil and gas lease road	Perm.	15	25	E, F, G, H	1
		894	0.5	New	Open land	Perm.	0	25	E, F, G, H	1
IRON HORSE METER STATION										
Grady										
PAR-22A	47.5	360	0.2	New	Agriculture	Perm.	0	20	E, F, G, H	1, 4
NGPL-001 METER STATION										
Carter										
PAR-68A	119.2	8	<0.1	New	Open land	Perm.	0	25	G	1, 4

APPENDIX E (cont'd)										
Temporary and Permanent Access Roads Associated with the Midcontinent Supply Header Interstate Pipeline Project										
Facility/County/ Road ID	Milepost	Length (feet)	Acres	New or Existing	Existing Road Type	Perm./ Temp.	Approx. Existing Width (feet)	Construction Width (feet)	Reason for Use ^a	Proposed Improvements ^b
MLV-1200-4										
Johnston										
PAR-98A	156.3	1,734	0.8	Existing	Unimproved two-track/field road	Perm.	15	20	E, F, G	1, 4
MLV-1200-5										
Bryan										
PAR-100A	175.1	125	0.1	New	Open land	Perm.	0	20	E, F, G	4
MLV-1200-6										
Bryan										
PAR-101A	183.5	169	0.1	New	Open land	Perm.	0	20	E, F, G	4
MLV-1100-5										
Stephens										
PAR-55A	86.7	288	0.4	Existing	Private gravel road	Perm.	25	25	E, F, G	1
Sub-Total		11,657	6.5							
YUKON CONTRACTOR YARD										
Canadian										
TAR-13A	about 15 miles east of MP17	1,512	1.1	Existing	Agriculture	Temp.	40	30	E, F	1, 4
TOTAL		191,493	111.4							
^a Reason for Use:										
A	To access pipeline right of way where stream crossings have not been established.									
B	To access pipeline right of way where access to the pipeline at road crossings is not possible.									
C	To access pipeline right of way where access to the pipeline at railroad crossings is not possible.									
D	Temporary access by heavy equipment and stinging trucks until access along the pipeline right of way is established.									
E	Access by heavy equipment for duration of the project.									
F	Inspector and trade light weight vehicle access (e.g., cars, pickups, welding rigs, HDD mud trucks).									
G	Permanent access (AR-1.1 to Okarche and Mark West Meter Station; PAR-14 and -15 to Calumet Compressor Station; PAR-44 to permanent ROW; AR-47 to Grady Meter Station; PAR-88, 88A, 88C, 88D to Tatum Compressor Stations).									
H	Intermediate access to long right-of-way sections.									
^b Proposed Improvements:										
1	Dress existing road surfaces with gravel if required.									
2	Install construction mats if required.									
3	Grade and gravel new temporary roads and/or use construction mats. Restore after construction.									
4	Grade and gravel new permanent roads, install culverts where required.									

APPENDIX F

HORIZONTAL DIRECTIONAL DRILL PROCEDURES AND MUD MONITORING PLAN



**Midship Pipeline Company, LLC
Midship Project**

Resource Report 2 – Water Resources Appendix 2D -

**Horizontal Directional Drill Procedures and
Mud Monitoring Plan Docket No. CP17-458-000**

April 2018

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sufficiently to accommodate the pipeline to be installed. The pipeline may or may not be installed concurrently with the hole enlargement, depending upon the final diameter of the enlarged hole and the soil conditions encountered.

The Contractor will provide the necessary labor, tools, materials and equipment to successfully complete the installation of directionally drilled piping as specified for this Project, within the guidelines set forth herein, and to the alignment, grades and specifications shown on the design drawings.

The Contractor will be responsible for the final constructed product, and for furnishing the qualified labor and supervision, and the equipment and supplies necessary for this method of construction.

HDD techniques are used to create or direct a borehole along a pre-determined path to a specified target location. This involves the use of mechanical and hydraulic deviation equipment to change the boring course and uses instrumentation to monitor the location and orientation of the boring head assembly along the pre-determined course.

Equipment, provided by the Contractor, will include drill bits, mechanical cutters, and/or mud motors along with several small diameter fluid jets to assist in fracturing the rock and soil formations, cooling the drill bits, and displacing the cuttings back to the surface as drill advances towards the target.

Steering will be accomplished by the installation of an offset section of drill stem or "bent sub" that causes the cutterhead to turn eccentrically about its centerline when it is rotating. When steering adjustments are required, the cutterhead-offset section is rotated toward the desired direction of travel and the drill stem is advanced forward without rotation.

3.0 PROTECTION OF UNDERGROUND FACILITIES

The Contractor will undertake the following steps prior to commencing drilling operations:

- Contractor will contact the appropriate federal, state, county and local agencies as directed by permits at least five (5) working days prior to commencing each HDD drilling operation.
- Contractor will contact the local "One-Call" center (or 811) a minimum of two (2) working days before commencing each HDD drilling operation to have all utilities in the area located and marked.
- When requested by the Company, Project Inspectors, or owner of a foreign utility, the Contractor will expose the foreign utility if the HDD will cross within 10 feet of the foreign utility. The foreign utility must be exposed or affirmatively located in situations where the HDD is running parallel and within 10 feet of a foreign utility.

4.0 INSTRUMENTATION

The Contractor will at all times provide and maintain instrumentation which will accurately locate the pilot hole alignment and depth, measure the drill string axial and torsional loads. The Contractor will also monitor mud volumes to determine if mud loss is occurring.

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- Proximity to HDD
- Other information provided
- Various general construction related notes
 - For example, the Contractor will confer with utility owners after the "One Call" contacts have been made to verify the information or changes related to known or any unknown utilities. The Contractor will work with the Company or its' engineering representative to alter HDD design if necessary to avoid foreign utilities if changes are required.
 - For example, the Contractor will pothole or excavate, under the direction of the foreign utility owners, any utility that is close enough in location and/or depth that may be impacted by the drilling operations.

6.0 JOB CONDITIONS

If necessary, the Contractor will prepare temporary all weather vehicle access to the HDD Entry and Exit sites. They will also provide a level, hard standing work area for equipment ingress and egress and for the drilling operation area. The work area prepared may generally include the following items based on location.

6.1 ENTRY (RIG SIDE)

- A rectangular area will be prepared approximately 200 feet long by approximately 150 feet wide. Actual size will be based on each location.
- Access will be by approved access roads and/or along the pipeline working right-of-way.
- The ground conditions around the HDD work area may utilize wooden construction or similar mats if necessary.
- A small drill pit will be excavated around the drill hole to temporarily contain the drilling mud and cutting returns until it is pumped to the mud cleaning equipment (see additional equipment below).

6.2 DEAD MAN

The Dead Man (an anchor for the drill rig) comes with the rig. It is usually about 1 foot deep x 22 feet long x 5 feet wide and is the primary anchorage device for the operation. The excavation for the Dead Man must be accurate and the top of the Dead Man must be flush with the ground. If additional anchorage is needed, the mud tanks can be connected to the rear of the rig or anchor piles will be driven to provide adequate stability. The anchorage must be rigid and must not pivot.

6.3 EXIT (PIPE SIDE)

The exit side setup will be similar in size and setup as the entry side except that this side will normally not have a drilling rig.

This is the side where the pipeline will be welded up into long sections to be pulled in after the hole has been drilled and reamed to proper size. Equipment may include the following: welding equipment, pipe

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9.0 HOURS OF OPERATION

Generally, HDD operating hours are expected to be during daylight hours, working 10 to 12 hours per day on a 6-day work schedule. When the pipe string is being pulled in, operating hours are normally continuous around the clock until the pipe is completely pulled in.

Where continuous hours of operations are required, the Company will work with homeowners in the vicinity of the drilling operations who may be disturbed by the work to come up with a workable situation to alleviate the landowner's concerns.

10.0 EXECUTION OF THE HDD**10.1 HDD GUIDANCE**

Traditionally a Magnetic Guidance System ("MGS") will be setup and operated by drilling personnel experienced with the system. The system uses parallel wires and other electronic transmission and receiving equipment that can accurately detect the depth and location of the drilling head as it progresses along the proposed drill path. As the drilling progresses, the Contractor can adjust the direction of the drill path based on the information received from the MGS. The direction is adjusted by orienting the bent sub in the direction that the adjustment is needed. Directional readings are made and corrected with each addition of a new length of drill pipe, which is generally about 30 feet long; however, directional reading may be made more often.

The layout of the Tru-Tracker wires, or control wires, requires a "line of sight" during the initial survey and layout of the drill. The distance between the Tru-Tracker wires (which are laid on the surface) should be approximately the same distance in width as the depth of the drill at any particular point. For example, if the depth of the HDD is 60 feet deep, the wires should be spaced about 60 feet apart. Tru-Tracker wires should be equidistant from the drilling centerline when viewed along the alignment (plan view). The Tru-Tracker wires do not have to be continuous (i.e., when a river has to be crossed).

The drilling accuracy is directly related to the layout of the Tru-Tracker wires, and experience of the Contractor to read the location of the drill. Depending on the HDD location and depth, the Contractor may need to use other tracking methods such as gyroscopic equipment. As part of the plan, the Contractor will identify the method of tracking they expect to use for approval.

10.2 DIRECTIONAL DRILLING OPERATION

A complete Directional Drilling Rig may consist of the following major components provided by the Contractor:

- Rigs with sufficient capacity for HDD installations will be used. Pull force capacities often range up to 1,000,000 pounds of capacity with over 80,000 ft.-lbs. of torque, as required
- Rig power unit

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10.2.2 Reaming

Once the drill bits exit at the prescribed location, the downhole assembly (drill bit, steering tool, etc.) is detached and a series of reamers are installed and pullback along the pilot hole until the hole size is larger enough to pull the pipe in. Typically for a 36-inch-diameter pipeline, there will be a 24-inch diameter for the first reaming pass, followed by a 36-inch and 48-inch diameter second and third reaming pass. The Contractor will then run a 36-inch barrel through the hole to ensure a clean bore hole.

During the reaming process, bentonite slurry is pumped under high pressure through the drill string to the reamer.

Reaming operations will be conducted at the discretion of the Contractor to ensure that the hole is sufficient to accommodate the pull section.

Reaming operation diameters are typically limited to 1.5 times the service pipe diameter; however, to avoid damage to the line pipe during installation due to design factors (i.e., soil conditions, project length and/or alignment, soil strata, etc.) the Contractor reserves the right to exceed the 1.5 factor.

When the reaming operation of the hole is completed, a “swab” or “barrel reamer” is pulled through the hole. Drilling mud is pumped through the drill string to the reamer as it is pulled along the drill path. This ensures the hole is prepared for the carrier pipe pullback.

Once the Drill Superintendent is satisfied that the hole is clear of obstructions, and conditioned, and is ready for the pullback operation to begin, the pulling head which has been attached to the pipe to be pulled in, is then connected to the drill string by a swivel, and the pulling operations is started. The swivel prevents the carrier pipe from rotating in the hole during the pullback.

10.3 TESTING, INSPECTION, STRESS LOADS, BUOYANCY, AND POST PULLBACK**10.3.1 Testing and Inspection**

Prior to pulling the pipe in, the pipeline will be welded into long pipe strings. All welds will be visually inspected and non-destructively tested. The weld joints will then be coated with a corrosion protective coating and an additional abrasive resistant coating to protect the coating from abrasions as the pipe is pulled in. Prior to pullback, the pipe strings will be hydrostatically tested to a pressure of 95 to 100 percent of the pipe’s specific minimum yield strength (“SMYS”) for a period of not less than 4 hours. The entire length of the pipeline coating will also be inspected to locate any defects in the coating. Repairs will be made, as necessary.

10.3.2 Buoyancy

To reduce friction at the crown of the drilled hole due to the pipe rubbing along the top of the drill hole and the positive buoyancy of the carrier pipe in the bentonite slurry, the Contractor may use a PVC or HDPE pipe inserted in the carrier pipe to inject water into the pipe to counteract the positive buoyancy of the pipe.

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The "Formation Pressure Limiting Pressures" for each HDD, based on depth and soil composition, will be established with a safety factor of 1.5 of the pressures calculated by the Geotechnical Contractor and provided in the tables generated in the Geotechnical Report.

10.4.2 Water

Unless the Company has obtained permits to allow for the uptake of water from local waterbodies, the Contractor will supply water from a water hydrant or other approved water source. Non-potable water may need to be tested and/or treated prior to use in a hydrostatic test.

10.4.3 Re-Circulation

Recycled drilling fluid systems will incorporate linear motion shakers to adequately remove solids from the drilling fluids, before they are recycled in the drilling process. The Contractor may provide other drilling fluid handling equipment, as it deems necessary to properly manage the drilling fluids and to minimize drilling related wastes.

The Contractor will provide vacuum truck(s) and/or Frac tanks that have sufficient capacity to collect and transfer drilling fluids from the exit pit to the drilling fluid system, located at the drill entry, or to a disposal site.

10.4.4 Disposal

Disposal of excess drilling fluids will be conducted in compliance with all environmental regulations, right-of-way, workspace agreements and permit requirements. Drilling fluid disposal procedures, including identification of disposal sites, will be submitted to the Company for approval prior to commencing work.

Used drilling muds may be managed several ways: (1) it may be recycled for use at subsequent drill sites, (2) it may be beneficially used onsite for soil amendments, in accordance with any applicable state regulations, (3) it may be provided to a third party to be beneficially reused as fill or a soil amendment to agricultural fields, or (4) it may be disposed of at a commercial disposal site authorized for management of such wastes. Consideration has been given to beneficial use of drilling muds, where practical, to minimize the negative impacts associated with disposal of a potentially useful material. An inadvertent release plan for HDD crossings will be provided prior to construction.

11.0 MONITORING FOR AND CONTROLLING INADVERTENT RETURNS

The Contractor will employ best efforts to maintain full annular circulation of drilling fluids in order to reduce the chance of inadvertent return of mud to the surface in locations other than at the entry and exit holes of the HDD.

Control of drilling fluid returns at locations other than the entry and exit points will use the following methods:

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- On-site observation of the crossing area will be conducted during active drilling with mud circulation.
- Construction personnel will be briefed on what to watch for and will be made aware of the importance of timely detection and response to any release of drilling mud.
- Construction personnel will have appropriate, communication equipment (e.g., radio, cell phones) available at all times during installation of the directionally drilled crossing.
- The Drill Superintendent will have the authority to order installation of containment structures, if needed, and to require additional response measures if deemed appropriate.
- The Environmental Inspector and/or Regulatory Agency's monitor will have the authority to suspend drilling operations until Contractor has brought the release under control and/or require the Contractor to take other actions to minimize and cleanup the release.

13.0 RESPONSE TO INADVERTENT RETURNS

In the event an inadvertent drilling mud return is observed during the crossing, the return will be assessed to determine the amount of drilling mud being released and potential for the release to reach waterbodies or wetlands. Generally, releases will be handled as follows depending on location; however, site specific actions may be different if directed by the Environmental Inspector and/or by a Regulatory Agency's monitor.

13.1 UPLAND AREAS

Evaluate the release to determine if containment structures are warranted and can effectively contain the release. Deploy appropriate containment measures to contain and recover drilling mud as feasible.

Remove excess mud at a rate sufficient to prevent an uncontrolled spreading of drilling fluid beyond the containment area. Suspend drilling if the mud release cannot be controlled until appropriate containment is in place.

13.2 WETLAND AREAS

In the event of a mud release in a wetland area, the Contractor will immediately notify the Company's Environmental Inspector who will make notification to appropriate environmental regulatory agencies.

The Contractor will initiate immediate suspension of drilling until appropriate evaluation and containment measures are completed.

13.3 IN-STREAM

In the event of a mud release in a stream, the Contractor will contain the released drilling mud to prevent solids propagation. The Contractor will immediately suspend the drilling operation if the released volume is determined to pose a threat to human health and safety or the environment. The Contractor then will document the release and immediately notify the Company's Environmental Inspector, who will make notification to appropriate environmental regulatory agencies. If drilling has been stopped, it will not

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- Potential for secondary impact from the clean-up process is to be regularly evaluated and clean-up activities terminated if physical damage to the site is deemed to exceed the benefits of removal activities.
- In general, no clean-up measures will be initiated for in-stream releases. If site-specific conditions are such that containment and clean-up may be feasible and beneficial, fresh water washes or other low-impact steps may be employed without undue disturbance to the stream banks and bed.

Final clean-up of the drill site will return the area as close as practical to pre-drill conditions. Additional clean-up requirements may be stipulated by permit or ROW agreement.

14.0 ALTERNATIVE HDD SITE SELECTION

In the event an HDD cannot be completed at the proposed location, an alternate crossing location will be analyzed. The site conditions of the proposed alternate HDD locations will take into account, including geotechnical conditions, topography, condition of riparian area, water quality, potential threatened and endangered species, within and downstream of the bore area. Appropriate approvals from necessary regulatory agencies will be obtained. Any proposed alternate HDD location will be submitted to FERC with the analysis of the proposed site.

15.0 SITE-SPECIFIC DISCUSSION

Site-specific construction diagrams and a typical HDD drawing can be found in Appendix 1C and Appendix 1E of Resource Report 1, respectively. Table 1 describes planned activities deemed necessary between the entry and exit points of the proposed HDDs.

Table 1. Planned Activities between the Entry and Exit Points of the HDDs				
HDD No.	MP	Feature	Type of Clearing Proposed^a	Notes
1	7.7	North Canadian River	Hand-cleared footpath for guide wire on both sides; additional hand clearing of wider path on the entry (south) side to access water source.	Limited number of trees (approximately 50 feet linear) on south (entry) side to be hand cleared to 10-foot width to allow rubber-tired vehicles to carry hoses, pumps, etc.
2	15.7	I-40	Hand-cleared footpath for guide wire on north side.	South side is open.
3	28.4	Canadian River	Hand-cleared footpath for guide wire on both sides.	Not a water source
4	36.9	Railroad	No clearing needed, except possibly for brush immediately adjacent to the railroad.	Both sides are open.
5	65.0	Washita River	Hand-cleared footpath for guide wire on both sides. Minimal hand clearing, if any, in thin tree line on north side.	Appears open to bank on north (entry) side for rubber-tired vehicle access to carry hoses, pumps, etc. to water source.
6	100.5	Wildhorse Creek	Hand-cleared footpath for guide wire on both sides.	Both sides are relatively open; appears open to bank on south (entry) side for rubber-tired vehicle access to carry hoses, pumps, etc. to water source.
7	120.2	Henry House Creek	Minimal hand clearing, if any, on both sides for guide wires.	Both sides are open; appears open to bank on west (entry) side for rubber-tired vehicle access to carry hoses, pumps, etc.

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side if an inadvertent release of drilling fluids occurs (Section 13.0).

All areas impacted by the I-40 HDD will be allowed to return to their previous conditions after the HDD has been completed. No false ROW will be required for this HDD.

15.3 CANADIAN RIVER (MAINLINE MP 28.4)

At the Canadian River HDD, hand clearing will be used between the entry and exit points, where clearing is necessary, to create a narrow path for guide wires on both sides of the river (Table 1). The Canadian River is not a water source for the Project, so no additional access is planned. However, additional hand clearing could be requested in the field if an inadvertent release of drilling fluids occurs and access for rubber-tired containment and clean-up equipment is needed (Section 13.0).

The space between the HDD entry and exit points at the Canadian River includes mostly thinly forested areas in uplands adjacent to the river, but also small areas under active cultivation or developed for pasture (specifically at the entry and exit points). All of these areas will be allowed to return to their previous conditions after the HDD has been completed. No false ROW will be required for this HDD.

15.4 OKLAHOMA KANSAS TEXAS RAILROAD (OKT RR) (MAINLINE MP 36.9)

At the OKT RR HDD, no clearing is anticipated to be needed for the guide wires, except possibly for limited removal of brush immediately adjacent to and on both sides of the railroad (Table 1). Additional hand clearing could be requested in the field if an inadvertent release of drilling fluids occurs, and access for rubber-tired containment and clean-up equipment is needed (Section 13.0).

The space between the HDD entry and exit points at the railroad crossing primarily includes areas under active cultivation and developed for pasture. Narrow strips (<100 feet on each side) of brush and sparsely distributed trees run parallel and adjacent to the rail bed. All of these areas will be allowed to return to their previous conditions after the HDD has been completed. No false ROW will be required for this HDD.

15.5 WASHITA RIVER #1 (MAINLINE MP 65.0)

At the Washita River #1 HDD, hand clearing will be used between the entry and exit points, where clearing is necessary, to create a narrow path for guide wires on both sides of the river, as necessary (Table 1). The area from the entry point to the river (north side) already is relatively open for this purpose and for access for rubber-tired vehicles needed to set pumps and run hoses for hydrostatic testing and drilling mud water. Additional hand clearing could be requested in the field, particularly on the exit side, if an inadvertent release of drilling fluids occurs, and access for rubber-tired containment and clean-up equipment is needed (Section 13.0).

The space between the HDD entry and exit points at the Washita River includes areas under active cultivation, pasture, and forest in uplands along the southern river bank. All of these areas will be allowed to return to their previous conditions after the HDD has been completed. No false ROW will be required

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15.9 ROCK CREEK (MAINLINE MP 151.7)

At the Rock Creek HDD, hand clearing will be used between the entry and exit points, where clearing is necessary, to create a narrow path for guide wires on both sides of the creek, as necessary (Table 1). In addition to the hand clearing for guide wires, additional hand clearing may be required on the east side (entry side) for use by rubber-tired vehicles in assisting with accessing water for hydrostatic testing and drilling mud water. This additional hand-cleared access also will serve as a contingency for moving rubber-tired containment and cleanup equipment into the area if an inadvertent release of drilling fluids occurs (Section 13.0). Alternatively, for access to the water source, Midship will attempt to acquire permission to use the existing co-located ROW.

The space between the HDD entry and exit points at Rock Creek is primarily forested land on the east side of the creek and sparsely forested pasture on the west side, all adjacent to an existing ROW. These areas on both sides of the creek will be allowed to return to their previous conditions after the HDD has been completed. False ROW in cleared or sparsely forested uplands will be required on the west (exit) side of this HDD.

15.10 PENNINGTON CREEK (MAINLINE MP 154.1)

At the Pennington Creek HDD, hand clearing will be used between the entry and exit points, where clearing is necessary, to create a narrow path for guide wires on both sides of the creek (Table 1). Pennington Creek is not a water source for the Project, so no additional access is planned. However, additional hand clearing could be requested in the field if an inadvertent release of drilling fluids occurs and access for rubber-tired containment and clean-up equipment is needed (Section 13.0).

The space between the HDD entry and exit points at Pennington Creek includes open land on the west side of the creek, with a few scattered, isolated trees in uplands. False ROW will be required for this HDD on the west (exit) side of the creek. The false ROW will span an intermittent stream near MP 153.6 and require removal of an adjacent small stand of trees. The east side of Pennington Creek is mostly open with scattered, isolated trees nearer the creek that likely can be avoided. A somewhat denser stand of trees in an upland occurs farther to the east where the drill equipment will be staged.

The cleared areas on both sides of the creek will be allowed to return to their previous conditions after the HDD has been completed.

15.11 BLUE RIVER (MAINLINE MP 174.0)

At the Blue River HDD, hand clearing will be used between the entry and exit points, where clearing is necessary, to create a narrow path for guide wires on both sides of the river (Table 1). The Blue River is not a water source for the Project, so no additional access is planned. However, additional hand clearing could be requested in the field if an inadvertent release of drilling fluids occurs and access for rubber-tired containment and clean-up equipment is needed (Section 13.0).

The space between the HDD entry and exit points at the Blue River crossing is primarily upland forested

APPENDIX G

ROAD AND RAILROAD CROSSINGS ASSOCIATED WITH THE MIDCONTINENT SUPPLY HEADER INTERSTATE PIPELINE PROJECT

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APPENDIX G				
Road and Railroad Crossings Associated with the Midcontinent Supply Header Interstate Pipeline Project				
Facility/County/Roadway or Railroad Name	Milepost	Type	Jurisdiction	Crossing Method
MAINLINE				
Canadian				
Dirt road	0.2	Dirt	Lease	Open cut
248th Street NW	0.5	Asphalt	Local/county	Conventional bore
234th Street NW	1.8	Gravel	Local/county	Open cut
220th Street NW	2.8	Gravel	Local/county	Open cut
206th Street NW	3.8	Gravel	Local/county	Open cut
Road	4.3	Gravel	Lease	Open cut
192nd Street NW	4.8	Gravel	Local/county	Open cut
Edmond Road NW	5.9	Asphalt	Local/county	Conventional bore
N Calumet Road	6.0	Asphalt	Local/county	Conventional bore
164th Street NW	6.9	Gravel	Local/county	Open cut
150th Street NW	8.1	Gravel	Local/county	Open cut
Memorial Road	9.2	Gravel	Local/county	Open cut
AT&L Railroad	9.3	Railroad	Federal	Conventional bore
U.S. Highway 270	9.3	Asphalt	Federal	Conventional bore
N Red Rock Road	9.7	Gravel	Local/county	Open cut
122nd Street NW	10.2	Asphalt	Local/county	Conventional bore
Road	10.6	Gravel	Farm road	Open cut
N Red Rock Road	11.2	Gravel	Local/county	Open cut
Darlington Road NW	11.4	Gravel	Local/county	Open cut
Britton Road NW	12.5	Gravel	Local/county	Open cut
U.S. Highway 270	13.7	Asphalt	State / federal	Conventional bore
Jones Road NW	13.9	Gravel	Local/county	Open cut
State Highway 66	15.1	Concrete	Local/county	Conventional bore
I-40/U.S. Highway 270 (WBL)	15.7	Asphalt	Federal	HDD
I-40/U.S. Highway 270 (EBL)	15.7	Asphalt	Federal	HDD
Elm Street W	16.1	Gravel	Local/county	Open cut
27th Street SW (Smith Road W)	17.5	Gravel	Local/county	Open cut
S Courtney Road	19.3	Gravel	Local/county	Open cut
Reuter Road W	20.0	Gravel	Local/county	Open cut
S. Heaston Road	20.7	Asphalt	Local/county	Conventional bore
Reno Road W	21.3	Asphalt	Local/county	Conventional bore
15th Street SW	22.5	Gravel	Local/county	Open cut
S Fort Reno Road	22.7	Gravel	Local/county	Open cut
29th Street SW	23.9	Gravel	Local/county	Open cut
S Brandley Road	24.2	Gravel	Local/county	Open cut
44th Street SW	25.1	Gravel	Local/county	Open cut
S Chiles Road	26.1	Gravel	Local/county	Open cut
59th Street SW	26.3	Gravel	Local/county	Open cut
SW 74th Street	27.3	Gravel	Local/county	Open cut
Grady				
County Road 1140	29.3	Gravel	Local/county	Open cut
County Road 1150	30.5	Gravel	Local/county	Open cut
N 2800 Road	30.6	Gravel	Local/county	Open cut
State Highway 37/152	31.7	Asphalt	State	Conventional bore
Road	32.5	Gravel	Farm road	Open cut

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APPENDIX G (cont'd)				
Road and Railroad Crossings Associated with the Midcontinent Supply Header Interstate Pipeline Project				
Facility/County/Roadway or Railroad Name	Milepost	Type	Jurisdiction	Crossing Method
E 1440 Road (River Road)	64.6	Asphalt	Local/county	Conventional bore
Road	65.9	Dirt	Farm road	Open cut
Old Bradley Highway	66.2	Asphalt	Local/county	Conventional bore
Road	66.6	Gravel	Lease	Open cut
Road	66.7	Gravel	Lease	Open cut
State Highway 19	67.3	Asphalt	State	Conventional bore
Road (Rock)	68.3	Gravel	Lease	Open cut
Road (Rock)	68.5	Gravel	Lease	Open cut
Road	68.9	Dirt	Lease	Open cut
Road	69.1	Gravel	Lease	Open cut
Road	69.5	Dirt	Lease	Open cut
Road (Rock)	69.6	Gravel	Lease	Open cut
Road (Rock)	69.7	Gravel	Lease	Open cut
Road (Rock)	69.7	Gravel	Lease	Open cut
Road (Rock)	69.8	Gravel	Lease	Open cut
Road (Rock)	70.2	Gravel	Lease	Open cut
Road	70.6	Grass	Farm road	Open cut
Road	71.1	Dirt	Farm road	Open cut
Road	71.7	Dirt	Farm road	Open cut
E 1510 Road	72.2	Gravel	Local/county	Open cut
E 1520 Road	73.3	Asphalt	Local/county	Conventional bore
Road	73.4	Dirt	Farm road	Open cut
N 2970 Road	74.0	Caliche	Local/county	Open cut
Road	74.3	Gravel	Farm road	Open cut
Road	75.4	Caliche	Lease	Open cut
Road	76.0	Grass	Farm road	Open cut
Road	76.3	Grass	Farm road	Open cut
Road	76.5	Grass	Farm road	Open cut
Road	76.7	Gravel	Lease	Open cut
Road	76.8	Gravel	Lease	Open cut
E 1550 Road	77.3	Asphalt	Local/county	Conventional bore
Road	77.9	Gravel	Lease	Open cut
Garvin				
Road	79.0	Gravel	Lease	Open cut
Road	80.2	Gravel	Lease	Open cut
N 3000 Road	80.3	Gravel	Local/county	Open cut
Road	80.6	Gravel	Farm road	Open cut
Road	81.1	Gravel	Farm road	Open cut
E 1578 Road	81.1	Gravel	Local/county	Open cut
E 1590 Road	82.4	Asphalt	Local/county	Conventional bore
N 3010 Road	82.9	Gravel	Local/county	Open cut
Road	83.0	Gravel	Farm road	Open cut
Road	83.1	Gravel	Lease	Open cut
Road	83.7	Gravel	Farm road	Open cut
Road	84.5	Gravel	Lease	Open cut
Road	84.8	Grass	Farm road	Open cut

APPENDIX G (cont'd)				
Road and Railroad Crossings Associated with the Midcontinent Supply Header Interstate Pipeline Project				
Facility/County/Roadway or Railroad Name	Milepost	Type	Jurisdiction	Crossing Method
N 3120 Road (Quinton Road)	103.3	Asphalt	Local/county	Conventional bore
Road	103.4	Gravel	Lease	Open cut
Road	103.4	Gravel	Lease	Open cut
Road	103.7	Gravel	Lease	Open cut
Road	103.8	Gravel	Lease	Open cut
Cargo Road	104.3	Gravel	Local/county	Open cut
Deacon Road	105.0	Gravel	Local/county	Open cut
Van Kirt Road	105.5	Asphalt	Local/county	Conventional bore
Road	105.7	Asphalt	Farm road	Open cut
Road	106.2	Gravel	Farm road	Open cut
Pookville Road	106.7	Asphalt	Local/county	Conventional bore
Sierra Hill Road	107.6	Gravel	Local/county	Open cut
Road	110.2	Gravel	Farm road	Open cut
Road	110.9	Gravel	Farm road	Open cut
Road	111.9	Gravel	Farm road	Open cut
Road	112.3	Gravel	Lease	Open cut
Road	113.2	Asphalt	Lease	Open cut
Road	113.6	Gravel	Lease	Open cut
Road	113.7	Gravel	Farm road	Open cut
Road	114.4	Gravel	Farm road	Open cut
Woodford Road	117.1	Asphalt	Local/county	Conventional bore
Eagle Heights Road	118.1	Gravel	Local/county	Open cut
State Highway 53	118.5	Gravel	State	Conventional bore
Peach Tree Road	119.2	Asphalt	Local/county	Conventional bore
Road	119.4	Gravel	Farm road	Open cut
Road	119.7	Gravel	Private	Open cut
Deese Road	121.2	Asphalt	Local/county	Conventional bore
Horse Apple Road	122.3	Asphalt	Local/county	Conventional bore
Hereford Road	122.3	Asphalt	Local/county	Conventional bore
Road	124.1	Gravel	Lease	Open cut
Road	124.1	Dirt	Farm road	Open cut
Road	124.2	Dirt	Farm road	Open cut
Road	124.2	Dirt	Farm road	Open cut
I-35/State Highway 53 (SBL)	124.5	Concrete	State	Conventional bore
I-35/State Highway 53 (NBL)	124.5	Concrete	State	Conventional bore
State Highway 53	125.0	Asphalt	State	Conventional bore
Road	125.1	Gravel	Lease	Open cut
Road	125.9	Gravel	Lease	Open cut
U.S. Highway 77 (SBL)	126.0	Asphalt	Federal	Conventional bore
U.S. Highway 77 (NBL)	126.0	Asphalt	Federal	Conventional bore
Private Refinery Road	128.1	Asphalt	Local/county	Conventional bore
Road	128.5	Grass	Farm road	Open cut
Road	128.6	Grass	Farm road	Open cut
Dirt Road	129.4	Grass	TBD	Open cut
Happy Trails Road	130.2	Asphalt	Local/county	Conventional bore
Robin Road	131.3	Asphalt	Local/county	Conventional bore
Burlington Northern Santa Fe Railroad	131.7	Railroad	Private	Conventional bore

APPENDIX G (cont'd)				
Road and Railroad Crossings Associated with the Midcontinent Supply Header Interstate Pipeline Project				
Facility/County/Roadway or Railroad Name	Milepost	Type	Jurisdiction	Crossing Method
Bryan				
N 3690 Road	170.9	Gravel	Local/county	Open cut
State Highway 22	171.6	Asphalt	State	Conventional bore
N 3700 Road (Albert Pike Road)	172.0	Gravel	Local/county	Open cut
Fi McCulloch Road	173.1	Gravel	Local/county	Open cut
Road	173.4	Gravel	Farm road	Open cut
State Highway 48	175.1	Asphalt	State	Conventional bore
E 1990 Road (Nails Crossing Road)	175.5	Gravel	Local/county	Open cut
Field Road	175.8	Grass	Local/county	Open cut
E 2000 Road (Miller Road)	178.1	Gravel	Local/county	Open cut
N 3760 Road (Hat Powell Road)	178.5	Gravel	Local/county	Open cut
U.S. Highway 69/75 (SBL)	179.4	Asphalt	Federal	Conventional bore
U.S. Highway 69/75 (NBL)	179.5	Concrete	Federal	Conventional bore
Road	180.3	Grass	Farm road	Open cut
Old Highway 69 (Caddo Highway)	180.7	Asphalt	Federal	Conventional bore
Union Pacific Railroad	180.8	Railroad	Federal	Conventional bore
Caddo Hills Road	181.6	Caliche	Local/county	Open cut
Blue Stem Road	181.9	Gravel	Local/county	Open cut
N 3800 Road (Windswept Trail)	182.7	Gravel	Local/county	Open cut
Road	183.2	Dirt	Farm road	Open cut
Road	183.6	Dirt	Farm road	Open cut
E 2020 Road (Pritchard Road)	184.0	Gravel	Local/county	Open cut
Robinson Road	184.5	Asphalt	Local/county	Conventional bore
Morris Hill Lane	185.1	Gravel	Farm road	Open cut
Double Springs Road	187.7	Dirt	Local/county	Open cut
Driftwood Road	188.0	Dirt	Local/county	Open cut
Diamond Rock Road	188.3	Gravel	Local/county	Open cut
Mesquite Lane	188.9	Gravel	Local/county	Open cut
Terrel Road	189.0	Gravel	Local/county	Open cut
State Highway 22	190.0	Asphalt	State	Conventional bore
Slide Up Road	191.4	Asphalt	Local/county	Conventional bore
Road	192.5	Grass	Farm road	Open cut
Banty Road	193.5	Gravel	Local/county	Open cut
U.S. Highway 70	194.0	Concrete	Federal	Conventional bore
Burlington Northern Railroad	194.0	Railroad	Federal	Conventional bore
Labor Road	194.2	Gravel	Local/county	Open cut
Iron Gate Road	194.9	Gravel	Local/county	Open cut
E2083/Saramac Ln	196.3	Gravel	Local/county	Open cut
N 3920 Road (Sulphur Springs Road)	197.0	Asphalt	Local/county	Conventional bore
Road	197.7	Gravel	Farm road	Open cut
State Highway 70E	198.0	Asphalt	State	Conventional bore
Road	198.4	Dirt	Private	Open cut
E 2090 Road (Pipeline Road)	199.1	Gravel	Local/county	Open cut
N 3940 Road (Blue Bird Trail)	199.6	Gravel	Local/county	Open cut
CHISHOLM LATERAL				
Kingfisher				
E 0860 Road	CH0.1	Gravel	Local/county	Open cut
N 2950 Road	CH0.2	Gravel	Local/county	Open cut

APPENDIX G (cont'd)				
Road and Railroad Crossings Associated with the Midcontinent Supply Header Interstate Pipeline Project				
Facility/County/Roadway or Railroad Name	Milepost	Type	Jurisdiction	Crossing Method
Gravel Road to Oil Well	VE3.8	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.0	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.1	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.3	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.3	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.3	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.5	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE4.8	Gravel	Leased	Open cut
Alma Road	VE4.7	Gravel	Local/county	Open cut
Gravel Road to Oil Well	VE5.0	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE5.1	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE5.4	Gravel	Leased	Open cut
N 3030 Road	VE6.0	Gravel	Local/county	Open cut
Gravel Road to Oil Well	VE6.7	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE6.8	Gravel	Leased	Open cut
Cemetery Road (Bols D'Arc Road)	VE7.0	Asphalt	Local/county	Conventional bore
N 3040 Road	VE7.2	Asphalt	Local/county	Conventional bore
Gravel Road to Oil Well	VE7.4	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE7.8	Gravel	Leased	Open cut
Countyline Road	VE8.4	Gravel	Local/county	Open cut
Gravel Road to Oil Well	VE8.4	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE9.0	Gravel	Leased	Open cut
Carter				
Shamrock Road	VE9.5	Asphalt	Local/county	HDD
Gravel Road to Oil Well	VE10.0	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE10.2	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE10.6	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE10.7	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE11.0	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE11.1	Gravel	Leased	Open cut
Gravel Road to Oil Well	VE11.4	Gravel	Leased	Open cut
State Highway 76	VE11.5	Asphalt	State	HDD
Dirt Road	VE11.7	Gravel	Leased	Open cut
Garvin				
E 1730 Road ((Base Line Road)	VE11.7	Gravel	Local/county	Open cut
N 3090 Road	VE12.7	Gravel	Local/county	Open cut
Gravel Road to Oil Well	VE13.0	Gravel	Leased	Open cut

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APPENDIX H
KARST MITIGATION PLAN